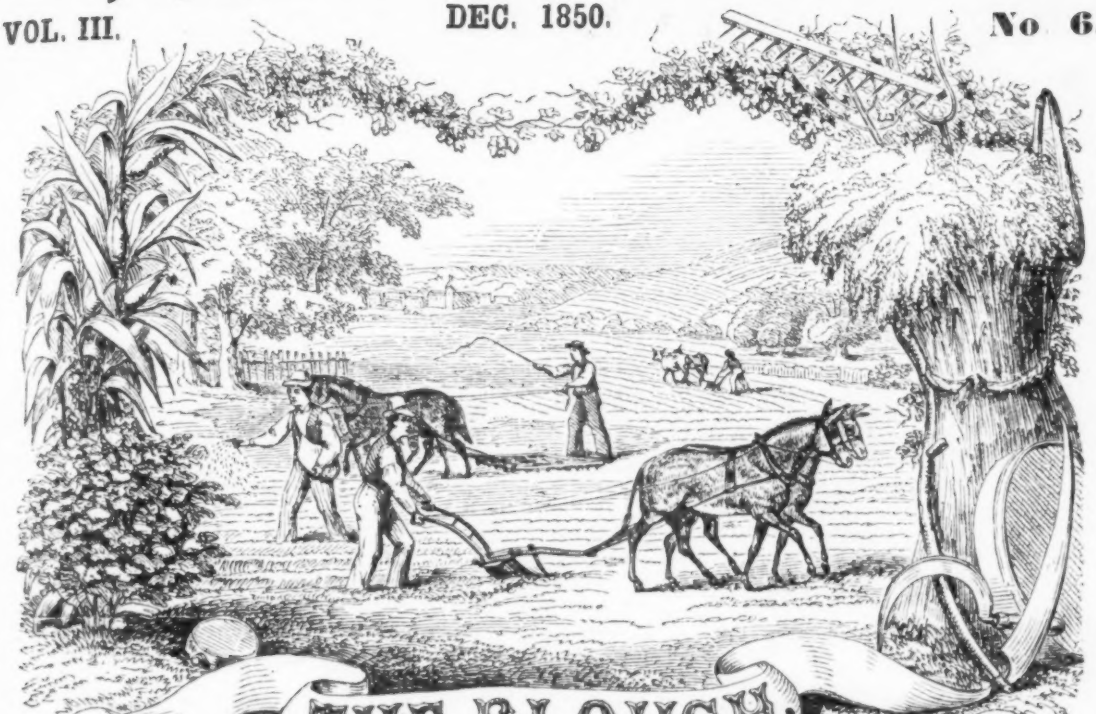
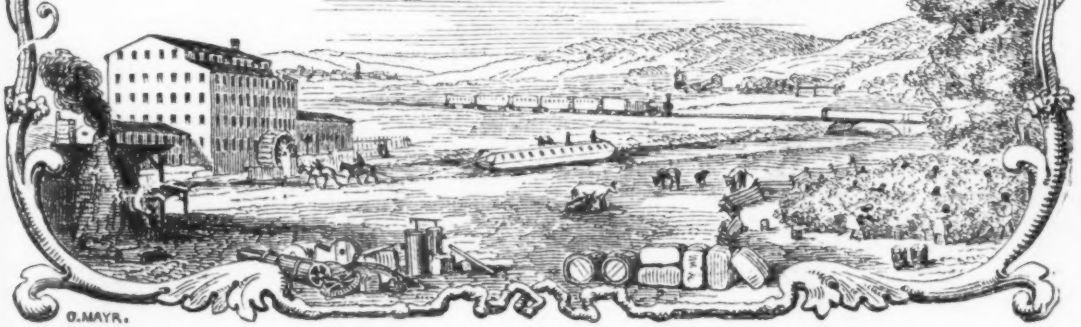
VOL. III. DEC. 1850. No 6.



THE PLOUGH,

THE LOOM AND THE ANVIL

J. S. SKINNER, EDITOR.



PHILADELPHIA:
J. S. SKINNER, 79 *Walnut-street.*

THE TERMS are in advance—$2 each, where five unite—$5 for two subscribers, or, for two years; and $3 for a single one. Sixty-four pages monthly, printed in the best style, and on the best paper. The work is stereotyped, and back Nos. or Vols. can always be supplied.

CONTENTS OF NO. VI.—VOL. III.

PROTECTION—How it affects the Political condition of Man—How it affects *credit*, Individual and National—Revenue and Expenditures—the Government—the Nation—Conclusion, ... 327 to 342

INSECTS INJURIOUS TO VEGETATION—Report on the Insects of Massachusetts . 344

FRUIT TREES—Preparation for Planting, and how to do the work . . . 347

GRAPE CULTURE, by S. Mosher of Cincinnati 348

THE GENUINE ARABIAN HORSE—His characteristics and value, by Sir James Cambell 349

HISTORY OF A MAN AND HIS NURSERY 351

Exhaustion of the Land, the necessary consequence of dependence on Foreign Markets 354

EFFECT OF PLOUGHING IN GREEN CROPS—As compared with Feeding them, on the Land 355

CLOSING OF COTTON MILLS, AND THE CONSEQUENT FLIGHT OF THEIR INMATES TO THE WEST 358

TO INCREASE A CROP OF ONIONS, by Daniel Buxton, of Mass. . . . 359

LIQUID MANURE—*Quantity from a given number of Animals* . . . 361

THE BALDWIN THEORY again—Facts in support of 363

MEAT BISCUIT—A new and important dietetic discovery—Testimony of Col. Sumner, U. S. A. 365

Duke of Wellington's Room at Walmer Castle described 366

PROFITS OF FRUIT CULTURE IN NEW ENGLAND—Why not the same in the Free Trade States 367

POTATO FLOUR—SALE OF HORSES 369

WOOL, AND WOOLEN FACTORIES IN TEXAS—The advantages of that State for sheep husbandry 370

ON RAISING AND BREEDING SWINE FOR THE BRISTLE—by P. A. Browne . . 372

THE LAFAYETTE CATTLE SHOW in Maryland, 26 years ago . . . 375

On the cultivation of the Melon in France 379

The last Fair of the Maryland Agricultural Society 380

"ELEMENTS OF AGRICULTURE"—Recommended for Common Schools . . 380

Statistics of tide water counties in Virginia 383

PROSPECTS FOR FARMERS 384

PROPER SHAPE AND QUALITIES FOR A BULL 386

HOW TO DEPRIVE THE FARMER OF A MARKET ON THE LAND FOR THE PRODUCTS OF THE LAND—ENGLISH IRON FOR THE BALTIMORE AND OHIO RAILROAD 388

Loss of Capital from want of concentration 389

GAME—WHAT CONSTITUTES GAME—Habits and economy of . . . 390

Horticulture for December 391

Prices of Country Produce 393

Readings for Mothers and Children 395

NEW-ENGLAND SUBSCRIBERS, except Rhode Island, are requested to forward their subscriptions for the third volume of the Plough, Loom and Anvil, post paid, either to the office at Philadelphia, or to M. P. Parish, 17 and 19 Cornhill, Boston.

☞ Our exchanges will please send their papers addressed to the AGRICULTURAL ADVERTISER, and not to "The Plough, the Loom and the Anvil."

Extract of a Letter from Washington Hunt, Governor-Elect of New-York.

DEAR SIR: *Albany, Nov.* 14, 1850.

I am sensible of the great service you have rendered to the productive interests of the country, by the dissemination of intelligence and the advocacy of sound principles; and in your continued efforts you will have my best wishes for your success. It gives me pleasure to become a subscriber to your valuable publication.

The Plough, the Loom, and the Anvil

VOL. III. DECEMBER, 1850. No. VI.

THE HARMONY OF INTERESTS:

AGRICULTURAL, MANUFACTURING, AND COMMERCIAL.

BY H. C. CAREY.

CHAPTER TWENTY-THIRD.

HOW PROTECTION AFFECTS THE POLITICAL CONDITION OF MAN.

THE larger the return to labour, the greater will be the power to accumulate capital. The larger the proportion which capital seeking to be employed bears to the labourers who are to employ it, the larger will be the wages of labour, the greater the power of the labourer to accumulate for himself, and the more perfect will be his control over the disposition of his labour and the application of its proceeds, whether to private or to public purposes.

The freeman chooses his employer, sells his labour, and disposes of the proceeds at his pleasure. The slave does none of these things. His master takes the produce of his labour, and returns him such portion as suits his pleasure.

Throughout the world, and in all ages, freedom has advanced with every increase in the ratio of wealth to population. When the people of England were poor, they were enslaved, but with growing wealth they have become more free. So has it been in Belgium and in France. So is it now in Russia and Germany, and so must it everywhere be. India is poor, and the many are slaves to the few. So is it in Ireland. Freedom is there unknown. The poor Irishman, limited to the labours of agriculture, desires a bit of land, and he gives the chief part of the product of his year's labour for permission to starve upon the balance, happy to be permitted to remain on payment of this enormous rent. He is the slave of the land-owner, without even the slave's right to claim of him support in case of sickness, or if, escaping from famine, he should survive to an age that deprives him of the power of labouring for his support. England employs fleets, paid for out of taxes imposed on starving Irishmen, to prevent the people of Brazil from *buying* black men, and women, and children, on the coast of Africa, while holding herself ready to *give* white men, and women, and children, to any who will carry them from her shores, and even to add thereto a portion of the cost of their transportation; and this she does without requiring the transporter to produce even the slightest evidence that they have been delivered at their destined port in "good order and well-conditioned." When Ireland shall become rich, labour will become valuable, and man will become free. When Italy was filled with prosperous communities, labour was productive, and it was in demand; and then men who had it to sell fixed the price at which it should be sold. With growing poverty, labour

ceased to be in demand, and the buyer fixed the price. The labourer then became a slave. If we follow the history of Tuscany, we can find men becoming enslaved as poverty succeeded wealth; and again may we trace them becoming more and more free, as wealth has grown with continued peace. So has it been in Egypt, and Sicily, and Spain. Everywhere poverty, or a deficiency of those aids to labour which constitute wealth, is, and has invariably been, the companion of slavery; and everywhere wealth, or an abundance of ploughs, and harrows, and horses, and cows, and oxen, and cultivated lands, and houses, and mills, is, and has invariably been the companion, and the cause, of freedom.

If protection be a "war upon labour and capital," it must tend to prevent the growth of wealth, and thus to deteriorate the political condition of man.

The farmer who exchanges his food with the man who produces iron by means of horses, wagons, canal-boats, merchants, ships, and sailors, gives much food for little iron. The iron man, who exchanges his products for food through the instrumentality of the same machinery, gives much iron for little food. The chief part of the product is swallowed up by the men who stand between, and grow rich while the producers remain poor. The growth of wealth is thus prevented, and inequality of political condition is maintained.

The farmer who exchanges directly with the producer of iron gives labour for labour. Both thus grow rich, because the class that desires to stand between has no opportunity of enriching themselves at their expense. Equality of condition is thus promoted.

The object of protection is that of bringing the consumer of food to take his place by the side of the producer of food, and thus promoting the growth of wealth and the improvement of political condition. That it does produce that effect, is obvious from the fact that, in periods of protection, such vast numbers seek our shores, and that immigration becomes stationary, or diminishes, with every approach towards that system which is usually denominated free trade.

The colonial system is based upon cheap labour. Protection seeks to increase the reward of labour. The one fills factories with children of tender years, and expels men to Canada and Australia; the other unites the men and sends the children to school.

The Irishman at home is a slave. He prays for permission to remain and pay in pounds sterling for quarters of acres, and his request is refused. Transfer him here and he becomes a freeman, choosing his employer and fixing the price of his labour. The Highlander is a slave that would gladly remain at home; but he is expelled to make room for sheep. One-ninth of the population of England are slaves to the parish beadle, eating the bread of enforced charity, and a large portion of the remaining eight-ninths are slaves to the policy which produces a constant recurrence of chills and fevers—overwork at small wages at one time, and no work at any wages at another. Transfer them here and they become freemen, selecting their employers and fixing the hours and the reward of labour. The Hindoo is a slave. His landlord's officers fix the quantity of land that he must cultivate, and the rent he must pay. He is not allowed, on payment even of the high survey assessment fixed on each field, to cultivate only those fields to which he gives the preference; his task is assigned to him, and he is constrained to occupy all such fields as are allotted to him by the revenue officers, and whether he cultivates them or not, he is saddled with the rent of all. If driven by these oppressions to fly and seek a subsistence elsewhere, he is followed wherever he goes and oppressed at discretion, or deprived of the advantages he might expect from a change of residence. If he work for wages, he is paid in money when grain is high, and in grain when it is low. He, there-

fore, has no power to determine the price of his labour. Could he be transferred here, he would be found an efficient labourer, and would consume more cotton in a week than he now does in a year, and by the change his political condition would be greatly improved.

Protection looks to the improvement in the political condition of the human race. To accomplish that object, it is needed that the value of man be raised, and that men should everywhere be placed in a condition to sell their labour to the highest bidder—to the man who will give in return the largest quantity of food, clothing, shelter, and other of the comforts of life. To enable the Hindoo to sell his labour and to fix its price, it is necessary to raise the price of his chief product, cotton. That is to be done by increasing the consumption, and that object is to be attained by diminishing the waste of labour attendant upon its transit between the producer and the consumer. Fill this country with furnaces and mills, and railroads will be made in every direction, and the consumption of cotton will speedily rise to twenty pounds per head, while millions of European labourers, mechanics, farmers, and capitalists will cross the Atlantic, and every million will be a customer for one-fourth as much as was consumed by the people of Great Britain and Ireland in 1847. The harmony of the interests of the cotton-growers throughout the world is perfect, and all the discord comes from the power of the exchangers to produce apparent discord.

It is asserted, however, that protection tends to build up a body of capitalists at the expense of the consumer, and thus produce inequality of condition. That such is the effect of *inadequate* protection is not to be doubted. So long as we continue under a *necessity* for seeking in England a market for our surplus products, her markets will fix the price for the world, and so long as we shall continue to be under a *necessity* for seeking there a small supply of cloth or iron, so long will the prices in her markets fix the price of all, and the domestic producer of cloth and iron will profit by the difference of freight both out and home. With this profit he takes the risk of ruin, which is of perpetual occurrence among the men of small capitals. Those who are already wealthy have but to stop their furnaces or mills until prices rise, and then they have the markets to themselves, for their poorer competitors have been ruined. Such is the history of many of the large fortunes accumulated by the manufacture of cloth and iron in this country, and such the almost universal history of every effort to establish manufactures south and west of New England.

Inadequate and uncertain protection benefits the farmer and planter little, while the uncertainty attending it tends to make the rich richer and the poor poorer, thus producing social and political inequality.

Adequate and certain protection, on the contrary, tends to the production of equality—first, because by its aid the *necessity* for depending on foreign markets for the sale of our products, or the supply of our wants, will be brought to an end, and thenceforth the prices, being fixed at home, will be steady, and then the smaller capitalist will be enabled to maintain competition with the larger one, with great advantage to the consumers—farmers, planters, and labourers; and, second, because its benefits will be, as they always have been, felt chiefly by the many with whom the price of labour constitutes the sole fund out of which they are to be maintained.

If we take the labour that is employed in the factories of the country, from one extremity to the other, it will be found that nearly the whole of it would be waste, if not so employed. If we take that which is employed in getting out the timber and the stone for building factories and furnaces, it will be found that a large portion of it would otherwise be waste. If we inquire into the operations of the farmer, we find that the vicinity of a factory, or

furnace, enables him to save much of the labour of transportation, and to sell many things that would otherwise be waste. Thus far, the advantage would seem to be all on the side of the employed, and not on that of the employer.

Let us now suppose that all protection were abolished, and that perfect freedom of trade were established, and that the result were, as it inevitably would be, to close every factory, furnace, rolling mill, and coal-mine in the country, and see what would be the result. The owners of such property would lose a few millions of dollars of rents, or profits, but the supply of fuel would be less by three millions of tons, that of iron would be less by eight hundred thousand tons, and that of cotton cloth would be less by almost a thousand millions of yards. The demand for the labour now employed in the production of those commodities would be at an end, and the spare-labour of men, and women, and children, and wagons, and horses, and the various things now used in and about factories and furnaces, would then be wasted, coal and iron and cloth would be doubled in price, and labour would be diminished in a corresponding degree. The power to import iron, or coal, or cloth, would not be increased by a single ton, or yard, and the people would be compelled to dispense with necessaries of life that are now readily obtained. The capitalists, whose means were locked up in factories or furnaces, would suffer some loss; but the mass of persons possessed of disengaged capital, and the receivers of *State* dividends, would be able to command, for the same reward, a much larger quantity of labour than before.

The object of protection is that of securing a demand for labour, and its tendency is to produce equality of condition. The jealousy of "overgrown capitalists" has caused many changes of policy; but, so far as they have tended to the abolition of protection, they have invariably tended to the production of inequality. The wealthy capitalist suffers some loss; but he is not ruined. A change takes place, and he is ready to avail himself of it, and at once regains all that had been lost, with vast increase. The small capitalist has been swept away, and his mill is in a state of ruin. By the time he can prepare himself to recommence his business, the chance being past, he is swept away again, and perhaps for the last time.

For months past, the rate of interest on a certain species of securities has been very low. The wealthy man could borrow at four per cent.; the poor man, requiring a small loan on a second-rate security, could scarcely obtain it at any price. The man who has coal to sell, or iron to sell, must have the aid of middlemen to act as endorsers upon the paper received from his customers, and their commissions absorb the profits. The wages of the miner have been greatly reduced, while the profits of the speculator have been increased. The reason of all this is, that, throughout the nation, there prevails no confidence in the future. It is seen that we are consuming more than we produce; that our exports do not pay for our imports; that we are running in debt; that furnaces and mills are being closed; and every one knows what must be the end of such a system. Re-enact the tariff of 1842, and the trade of the middleman would be at an end, because confidence in the future would be felt from one extremity of the land to the other. Should we not find in this some evidence of the soundness of the principle upon which it was based? The system which gives confidence must be right; that which destroys it must be wrong.

Confidence in the future—Hope—gives power to individuals and communities. It is that which enables the poor man to become rich, and the character of all legislative action is to be judged by its greater or less tendency to produce this effect. A review of the measures urged upon the nation by the advocates of the system miscalled free trade, shows, almost without an exception, they have tended to the destruction of confidence, and there-

fore to the production of the political revolutions referred to in the first chapter.

The direct effect of the insecurity that has existed has been to centralize the business of manufacture in one part of the Union and in the hands of a comparatively limited number of persons—such as could afford to take large risks, in hope of realizing large profits. Had the tariff of 1828 been made the settled law of the land, the Middle and Southern States would now be studded with factories and furnaces, and while the North and East would not have been less rich, they would be far richer, and the present inequality of condition would not now exist.

The power of the North, as compared with that of the South, is due to the jealousy of the former entertained by the latter, which has prevented the establishment of a decided system, having for its object the destruction of the English monopoly, and the ultimate establishment of perfect freedom of trade.

The object of the colonial system was that of taxing the world for the maintenance of a great mercantile, manufacturing, and landed aristocracy, and the mode of accomplishment was that of securing a monopoly of machinery. The object of protection is to break down that monopoly, and with it the aristocracy that collects for the people of Great Britain and the world these immense taxes, to be appropriated to the payment of fleets and armies officered by younger sons, and kept on foot for the maintenance of the existing inequality in Great Britain, Ireland, and India. All, therefore, who desire to see improvement in the political condition of the people of the world should advocate the system which tends to break down monopoly and establish perfect freedom of trade.

CHAPTER TWENTY-FOURTH.

HOW PROTECTION AFFECTS CREDIT—INDIVIDUAL AND NATIONAL.

THE existence of credit is evidence of the existence of confidence that the man who desires to obtain for a time the use of property intends to return it. The more universal this confidence, the more readily can the capitalist place his funds, and the larger will be the return. The more universal it is, the more readily can the labourer obtain the necessary aids to labour, and the more productive will be that labour. If protection be "a war upon labour and capital," it must tend to destroy the confidence of man in his fellow-man.

The object of protection is that of bringing the consumer to take his place by the side of the producer, exchanging labour for labour, and thus diminishing the *necessity* for credit. Its effect is to diminish the machinery of exchange, and thus to increase the productiveness of labour, and with it the *power* to obtain credit.

The object of the monopoly system is that of separating the consumer from the producer, and *compelling* both to repose confidence in distant men, thus increasing the *necessity* for credit. Its effect is that of increasing the machinery of exchange, and diminishing the productiveness of labour, and thus diminishing the *power* to obtain credit.

That such is its effect in the colonies of Great Britain, we know. In India, once so wealthy, the ordinary rate of interest is twelve per cent.; but the poor cultivator borrows seed at the rate of one hundred per cent. Credit there has no existence, and yet almost the whole exchanges of the country are made at a distance of many thousands of miles, by men in whom the consumer and producer are *compelled* to repose confidence.

In the West Indies, credit has almost entirely disappeared. In Canada,

even the government cannot effect loans without a guaranty from parliament. So is it throughout the whole range of colonies.

At home, capital is cheap, because of the want of general confidence. The capitalist takes two per cent.; but the labourer could not borrow at thirty per cent. The capitalist that owns machinery is enabled to dictate the terms upon which it shall be used by those who work. Sometimes he employs many work-people. At others few. Sometimes he works long time, and at others short time. At all times his people obtain but a small proportion of the products of labour; but at many times they obtain but *a very* small proportion, while at others they are unable to obtain the use of machinery at any price.

Abroad, the credit of English merchants is falling daily. But recently, there were in the great city of Liverpool, scarcely half a dozen houses that could be trusted with a cargo of cotton. Such are the effects of the system in which "Commerce is king," and the consumer and the producer are placed at the mercy of the exchanger.

At no period in this country did confidence grow more rapidly than in the period between 1830 and 1834. At none did it decline with such rapidity as between 1835 and 1842. With the action of the tariff of 1842, it was restored, but with that of 1846 it again declines. There is no demand for capital, and it is cheap. There is little demand for labour, and it too is cheap.

Never, probably, since the settlement of the country, did the poor man find so much difficulty in obtaining the aid of capital, as in 1842, the period of free trade. Never has he found it more easy than between 1844 and 1847. The period of distrust has again arrived. Money is said to be abundant, but the security must be undoubted, and the poor man pays two per cent. a month for the use of capital that the rich man cannot invest to produce him more than four per cent. per annum. There is no confidence existing.

"Notwithstanding the cheapness and abundance of money," says the New York Herald, "no one seems disposed to touch any thing in the way of speculation, and capitalists prefer loaning money at four per cent. interest, on good security, to purchasing stocks at present prices. They say that when they lend money on first-rate security, at a low rate of interest, they are sure of the principal and a small amount of interest, when they want it."

The re-establishment of the tariff of 1842 would restore confidence, and produce a demand for labour, and wages would rise—and a demand for capital, the price of which would also rise, and thus it would appear that in protection is to be found the harmony of interest between the labourer and the capitalist.

NATIONAL CREDIT.

From 1830 to 1835, the national credit grew, for we paid for what we imported. From 1835 to 1840, credit declined, for we ran largely in debt for cloth and iron, for which our exports could not pay. In 1842, national credit disappeared, for we were unable to pay even the interest on our debts. From 1843 to 1848, national credit grew, for we paid interest and commenced the reduction of the debt. In the last two years we have gone largely in debt, and must now either diminish our imports or run further into debt.

How long we can continue to do this, does not depend upon ourselves. Any circumstance producing a change in the rate of interest in Europe, would cause our certificates of debt to be returned upon us for payment, and what then would be the state of the national credit? A nation that is largely in debt is always in danger of losing its credit.

CHAPTER TWENTY-FIFTH.

HOW PROTECTION AFFECTS REVENUE AND EXPENDITURE.

THE more men live and work in connection with each other, the greater is their *power* to protect themselves. The more widely they are separated from each other, the greater is their *necessity* for seeking protection from others.

The more they live in connection with each other, the larger will be the product of their labour, and the greater will be their power to contribute towards the maintenance of peace and order. The less they live in connection with each other, the less productive will be their labour, and the less will be their power to contribute to that object.

With every increase in the productiveness of labour, the power of self-government thus increases, with increased power to contribute towards the expenditures incident to the maintenance of government; and with every diminution therein, the power of self-government decreases, with diminished power to contribute towards the public revenue required for paying others for performing the duties of government.

If protection be, as is asserted, a "war upon labour and capital," it must increase the necessity for government by others, and diminish the power to contribute towards its maintenance.

The object of protection is, however, that of enabling men to live in connection with each other, the consumer taking his place by the side of the producer, each protecting, and protected by, the other. This would seem to diminish the *necessity* for seeking protection from others. Another object of protection is that of enabling men to exchange with each other, giving labour for labour, without paying so many persons for standing between them. This would seem calculated to increase their power to pay for protection, should it be needed.

The object of the monopoly system—now known by the name of free trade—is that of separating the consumer from the producer, and diminishing their power to protect each other. Their exchanges are to be always made in distant markets, and many wagons, ships, and men are to stand between, for the care of which fleets and armies are needed. This would seem to increase their *necessity* for protection, while the diminished power of combination of action would seem to tend to decrease their *power* of paying for protection.

How stand the facts? The question will be answered by placing side by side the expenditures under the different systems:—

Protection.	Per annum.	Free trade.	Per annum.
1829 to 1834 .	$16,800,000	1834 to 1841 .	$31,700,000
1843 to 1845 .	20,700,000	1846 to 1849 .	44,500,000

The necessity for contributing towards the support of government seems to have increased with the approach towards free trade, and to have diminished as we approached protection.

The revenue from customs in the several periods, was as follows:—

	Per head.		Per head.
1830 to 1834 . .	$1·75	1835 to 1841 . .	0·84½
1843 to 1847 . .	1·36	1848–49 . . .	1·—

I exclude here the year 1847–48, because it was an entirely exceptional one. We had imported a large amount of free goods—specie—in the preceding year, and we exported it again in 1847–48, to exchange for duty-

paying ones, and the whole amount of duty received upon the goods so obtained in exchange, should be added to the revenue of 1846–47.

The power to *contribute* towards the revenue certainly decreased in the years of free trade, and precisely as the *necessity* for contributions increased. The amount actually paid was greater than is here set down, because the government collected, between 1834 and 1841, a large amount of duties upon goods received in exchange for certificates of debt; but that was merely a payment in advance of production, and the consequence of receiving such payment was, that it was nearly bankrupt in 1842, and compelled to borrow almost thirty millions to provide for the continuance of its own existence.

We are now doing the same thing. The amount of debt incurred in the last year was not less than twenty-two millions, and upon this the government obtained duties, as before, *in advance of production*, to the extent of almost seven millions. If the power to buy on credit were now to cease, the amount collected would fall to twenty-two millions. Were the debt contracted last year now to be paid, it would fall to fifteen millions, and a large addition would have to be made to the public debt, as in 1841–42. How long a time is to elapse before such will be the state of things, it is not for me to predict; but if we make this year a further addition of twenty millions to our foreign debt, and close as many furnaces as we did in the last one, the day for it cannot be far distant.

The power to contribute towards the maintenance of government depends upon the power of production, and every circumstance tending to diminish the one tends equally to the diminution of the other. The power of production is now rapidly diminishing, and must continue so to do.

Such likewise is the case in England. From year to year the payment of taxes is becoming more and more onerous, notwithstanding so large a portion of them is thrown upon the farmers and planters of the earth, by aid of the system under which they are compelled to give more food, cotton, tobacco, and sugar, for less and less cloth and iron; and yet from year to year the expenditures have been increasing. Poverty produced rebellion in Ireland, and chartism in England, and thus increased the necessity for soldiers and sailors. The exhaustion of the older provinces of India led to a desire for Affghanistan, Scinde, and the Punjaub; and the failure of a market for labour in the form of cotton, drove the Hindoo to opium, which led to a war in China, and thus was made a demand for fleets and armies. The poverty of Canada led to rebellion, and to the building of forts and ships. The anxiety to secure foreign markets has led to immense expenses for steamships and mail steamers, and thus the more the system tends to fail, the greater is the expenditure for its maintenance, and the less the ability of the people of England, and the farmers and planters of the world, to contribute thereto.

Let us now look to the other source of our national revenue—the PUBLIC lands.

The higher the value of labour, the more of it will be brought here for sale. The more people come here, the more land will be required. The larger and more valuable the freights homeward, the less will be the cost of freight outward, and the more numerous will be the commodities that can be exported to pay for those we may choose to import.

Were we now importing a million of men annually, the sales of land would soon reach ten millions of acres per annum. That point we should now reach in five years of perfect and fixed protection, and but few more years would be required to double both the importation of men and the sales of public lands. Here is a vast source of public revenue.

Perfect protection would, by degrees, diminish the import of cottons, iron,

and other duty-paying goods, but we should consume treble or quadruple the quantity of coffee, tea, and the raw materials for the production of which the soil or climate of the country is not suited, and thus should we raise the value of labour employed in agriculture throughout the world.

It is asked, "If we converted all our cotton into cloth, what would Europe produce to pay us for it?" In answer, it may be said that the object of protection is that of enabling the consumer of food to take his place by the side of the producer of food, not to separate them. It is to our interest that the people of England should supply themselves with clothing made by men who eat the food of England, and that such should be the case with those of Germany and Russia, Spain and Italy, and with every step in their progress they would need more cotton. To pay for it, they would employ their labour in the production of thousands of articles of taste and luxury, of which we should then consume immense quantities, and therewith there would be improvement of taste, refinement of feeling, elevation of character, and increase of individual and national strength, of which now we can form no conception.

Upon such commodities the duties would be moderate, and, as the imports of the more bulky of the duty-paying articles diminished, the customs' revenue would gradually decline, until at length the *necessity* for custom-houses would pass away, the *power* to maintain government with the land revenue having grown to take its place, and thus might be realized the wonderful idea of the government of an immense nation maintained without the necessity for a single man employed in the collection of taxes.

It would thus appear that between the interests of the treasury and the people, the farmer, planter, manufacturer, and merchant, the great and little trader and the shipowner, the slave and his master, the landowners and labourers of the Union and the world, the free trader and the advocate of protection, there is perfect harmony of interests, and that the way to the establishment of universal peace and universal free trade, is to be found in the adoption of measures tending to the destruction of *the monopoly of machinery*, and the location of the loom and the anvil in the vicinity of the plough and the harrow.

CHAPTER TWENTY-SIXTH.

HOW PROTECTION AFFECTS THE GOVERNMENT.

THE man whose labour is productive, and whose habits are economical, enjoys the confidence of the world; while he whose labour is unproductive, and whose habits are wasteful, is looked upon with distrust. With the one, each day is marked by an increase of strength; while with the other it is marked by an increase of weakness.

So is it with communities. The peaceful and industrious grow rich and strong. The warlike and wasteful become poor and weak.

If protection be "a war upon the labour and capital of the world," it must tend to cause diminution of wealth and strength, and the *monopoly system* of England must tend to the augmentation of both.

At no anterior period had the wealth and strength of this country grown with the rapidity with which it grew from 1830 to 1835. The nation was at peace and all were employed. At no period has decline been so obvious, or the descent more complete than in the period which followed. The nation was at war, and production declined until in many departments of industry it almost ceased. The name of America became almost a by-word for weakness and want of faith. In the four succeeding years, the recovery was such as to be almost marvellous, and then it was that the power of the nation first began to be admitted. That period has been followed by one of war and waste,

and largely increased expenditure, rendering necessary the collection of large revenues, while production is diminishing. The people and the government are now living on borrowed money, and how long they can continue to borrow is uncertain. The revenue from customs in the year ending in June last was $28,436,000

Of which there was collected on goods purchased with certificates of debt 6,600,000

To meet the demands of the government for the present year, the whole sum of $28,000,000 would be required, and, if we should cease to be able to purchase merchandise on credit, the government would be driven again to the raising of money by means of loans, and if at the same time the debts now being created were sent back upon us for payment, the present year might witness a repetition of the troubles of 1841 and 1842.

During the existence of the tariff of 1842, the government paid its way, and therefore it was strong. It is now carried on on credit, and therefore it is becoming weak. To the extent of the foreign debt created, the country has eaten and drunk and used that for which it has yet to pay, and the government has had its thirty per cent.; but a demand for payment would at once reduce the imports as much below the exports as they now exceed them, and the government would find its revenue decreased to the full extent of the present excess.

The contrast presented, on a review of the history of Great Britain and this country, is most instructive. Sixty years since, the former was rich and populous, while the latter was poor and its population was small and widely scattered. In wealth, the Union already exceeds her competitor, and in population it will do so at the close of the next decennial period.

The reason of this is to be found in the fact, that the policy of the one has tended to the separation of the consumer from the producer, while that of the other has, to some extent, tended towards bringing them together. The English system is based upon "ships, colonies, and commerce," and, in carrying it out, her colonies have been in succession exhausted. Ireland now lies prostrate and helpless—a burden upon her hands—an encumbrance rather than an advantage. Poverty and distress are coming gradually nearer and nearer home, while she is encumbered with an enormous debt, no part of which can she pay, and the interest upon which is yet paid only by aid of a series of repudiations quite as discreditable as those with which she is accustomed to charge upon Mississippi and Florida.*

The American system is based upon agriculture, the work of production, and its object has been that of producing prosperous agriculture, by bringing the consumer to take his place by the side of the producer, and thus establishing that great commerce which is performed without the aid of ships or wagons. By aid of that system the original thirteen States have planted numerous colonies, all of which have grown and thriven, giving and receiving strength, while those of England, so long the subjects of immense taxation, are now everywhere a cause of weakness. All desire to abandon her, while all would desire to unite with us, and were they at liberty to exercise their

* The great expansion of the Bank of England in 1839, was followed by the destruction of confidence among individuals to so great an extent that the three per cents went up to par, and the government availed itself of the opportunity to compel the holders of the four and a half per cents to take in exchange new certificates, bearing three and a half per cent. Shortly after the threes fell to eighty. The last expansion has brought about a similar state of things. Confidence is destroyed, and trade is paralyzed, and the threes are again almost at par; and it is now suggested that a new arrangement may be made by which the government may be enabled to repudiate a further portion of the interest on the debt.

inclinations, the sway of the Queen of Great Britain would, probably, at the close of the present year, be limited to that island alone, with its twenty or twenty-two millions of inhabitants.

The *free trade* of England consists in the maintenance of *monopoly*, and therefore is it repulsive. The protective system of this country looks to the breaking down of monopoly, and the establishment of *perfect free trade*, and therefore is it attractive.

The one looks to "cheap" labour, and therefore does it expel individuals as well as communities. The other looks to raising the value of labour, and therefore does it attract both individuals and communities.

Protection tends to the maintenance of peace, and the increase of wealth and power. The colonial system tends to the production of causes of war, and the diminution and ultimate destruction of both wealth and power.

Between the views of those who would desire to see their government strong for defending them in the enjoyment of all their rights in relation to the other communities of the world, and those of others who desire to see the government peacefully and economically administered, there is therefore perfect harmony.

CHAPTER TWENTY-SEVENTH.

HOW PROTECTION AFFECTS THE NATION.

THE man whose labour is productive, exercises the power of self-government, which increases with every increase in the productiveness of his labour. With every diminution in his power of production, he loses more and more the power of self-government, and ultimately becomes a slave.*

So is it with nations. With every increase in the productiveness of their labour, they are more enabled to determine for themselves their own course of action, uninfluenced by that of surrounding nations. With every diminution therein, they are more and more compelled to shape their course of action by that of others, losing the power of self-government.

With the diminished *necessity* for combination with their neighbours, there is an increased *power* for voluntary combination, (annexation,) tending still further to increase the return to labour. With increased *necessity* for combination, there is diminished *power* for voluntary combination, with diminished return to labour.

If protection be "a war upon labour and capital," it must diminish the power of voluntary union, and increase the necessity for uniting our efforts with those of distant nations. If the English monopoly system tend to increase the value of labour and capital, it must tend to increase the power of voluntary union, and diminish the necessity for involuntary union.

Of all the nations of the world, there is, at the present time, not one that exercises in a less degree the power of self-government than that of Great Britain. For the last thirty years, her policy has been dictated by others. The repeal of the laws prohibiting the export of machinery was a matter of necessity, and so have been, in succession, all the laws relative to duties on imports. The duty on cotton was abolished because other nations had obtained machinery. Slave-grown cotton was admitted duty free, while slave-grown sugar was subjected to heavy duties, because a supply of cotton was

* "The transition from absolute freedom to a state of slavery is now in progress among the Arabs of Mesopotamia, owing to diminished power of obtaining the means of subsistence by the modes heretofore pursued. The poor and the weak are enslaved by those who are stronger and more wealthy."—*Spectator, March*, 1840.

matter of necessity. The restrictions on slave-grown sugar were abandoned, because the abandonment was necessary. The navigation laws have, step by step, been abandoned, as matter of necessity. The corn laws were repealed because it was deemed necessary to conciliate the growers of corn into becoming large purchasers of cloth and iron. With each step in her progress, pauperism and crime increase, and the necessity for places of banishment for criminals increases, and with each there is increased difficulty in finding places willing to receive them. Having exhausted Van Diemen's land,* and Norfolk Island, the Cape was recently selected for the purpose, but the colonists have set an example of successful resistance that will be elsewhere followed. Canada is now to be set free, and Ireland is to be retained, neither of them of choice, but both as matters of necessity. The nation has lost the power of self-government. Its policy is being dictated to it by the other nations of the world. The tendency to voluntary union has ceased to exist, and each day brings with it new evidence that the dissolution of the British empire is at hand.

If such is the case with the owners of the loom and the anvil, how is it with their subjects who hold the plough and follow the harrow? Ireland has no power of self-government. She is a mere machine in the hands of those who perform the duties of government. Poor-laws are inflicted upon her to such an extent as almost to amount to a confiscation of property, and then other laws are passed to authorize commissioners to take possession of, and sell, a large portion of the property of the kingdom, thus encumbered.

The West Indies were gradually exhausted under the system, and their people despoiled of their property by virtue of laws passed by men who paid no portion of the enormous loss thus inflicted upon their fellow-subjects. The people of Canada have had new systems inflicted upon them with a view to the maintenance of peace, but peace there is none. All desire to obtain the right of self-government, the first step in which will be resistance to the monopoly system.

Of all the colonies of England, the only one that has prospered is this Union, and it has so done, because it has, in a certain degree, exercised the power of self-government, manifested by a determination to bring the loom and the anvil to take their natural places by the side of the plough and the harrow. Hence it is that every colony of Great Britain, Ireland included, desires annexation to us and separation from her. The tendency to voluntary union exists in a degree exceeding any thing that the world has yet seen. Nevertheless, we are yet but little more than a colony. Our people have no control over their own actions. They are almost as dependent upon the will of those who now desire, though vainly, to guide the movements of England, as are those of Canada.

If the people of that country determine to make railroads, iron rises in price, and we build furnaces and open coal mines, and import people to make iron and mine coal. If they cease to make roads, we shut up our furnaces

---

* "Thither nearly the whole convict population of Great Britain and Ireland, about 3500 annually in number, were sent for several years. * * The consequence was, that ere long *three-fifths* of the inhabitants of the colony were convicts. * * The morals of the settlement, thus having a majority of convicts, were essentially injured. Crimes unutterable were committed; the hideous inequality of the sexes induced its usual and frightful disorders; the police, how severe and vigilant soever, became unable to coerce the rapidly increasing multitude of criminals; the most daring fled to the woods, where they became bush-rangers; life became insecure, and property sank to half its former value."—*Blackwood's Magazine, November*, 1819. "At present, there are, or at least should be, above 5000 criminals annually transported from the British Islands."—*Ibid.*

and mines, and then the iron men and the coal men have to endeavour to raise food. If they ask a high price for cloth, we build mills. If employment become scarce with them, and their people cease to consume cloth, we close our mills, and our operatives are condemned to idleness. If the Bank of England make money cheap, we buy iron and cloth on credit; if it make it dear, we are called upon for payment, and then we break. If employment for capital be denied at home, our houses and lands rise in price; if capital become scarce, our houses and lands fall in value. If we build mills and furnaces, our people stay at home; if we close them, they scatter abroad. If money be cheap in England, our government obtains a large revenue from duties on the goods that are bought on credit; if it be dear, the revenue falls off, and the government begs for loans in Europe. The value of every thing, and the movement of every thing, in this country, are settled by the movement of the Bank of England, of all the large institutions of the world the one in the government of which there is manifested the least capacity; and the one, consequently, that possesses in the smallest degree the power of self-government. Four times in thirty years has it been on the verge of bankruptcy, and yet to its car and that of the government of England, now floundering in a sea of troubles, is this Union attached by aid of the system now known by the name of free trade.

For thus relinquishing the power of self-government, there should be a large consideration; yet all that we receive from Europe in return for all we send her is fifty cents' worth of iron, half a pound of wool, as much flax, an ounce or two of silk, a cup and saucer, and the weaving and twisting of a pound and a half of cotton, per head, all of which could be produced or performed here by fewer people than have come here in a single year, when we have made a market for their labour. Half a million of people would produce treble the flax, the wool, the silk, and the iron, the china-ware, and spin and weave treble the quantity of silk, wool, flax, and cotton, that we receive from Europe in return for all the land and labour employed in producing the cotton, tobacco, rice, grain, butter, cheese, pork, and other commodities that we send to that quarter of the world; and that half million would consume almost as much cotton as is now consumed by all the people of Ireland, besides being customers to the farmer for fifty millions of dollars' worth of food, timber, and other of the products of the soil. We thus relinquish the power of self-government, not only without receiving an equivalent, but we give our property without an equivalent, and therefore it is that the farmers and planters of the Union remain poor when they might become rich.

Rich they would grow, for the people thus imported would require a vast amount of shipping, and cotton, rice, and tobacco would go cheaply abroad, while a vast consumption at home would maintain the price, and both farmer and planter would be enabled to consume more largely of coffee, tea, silks, books, pictures, gold, silver, and all other articles of necessity or luxury not produced at home, and the producers of those commodities would consume more cloth and iron, both of which we should then produce so cheaply that we could send them abroad, and thus would come wealth and prosperity, happiness and independence.

To the consciousness of the necessity for protection against the monopoly system was due the state of feeling that led to the Revolution. Resistance to oppression led, on various occasions, to non-importation resolutions, and the people were everywhere urged to endeavour to clothe themselves. The necessity for protection was recognised by the early Congresses, and its importance urged upon them by every administration.

Fifty years since, power changed hands; but with the accession of Mr.

Jefferson came no change of policy. He thought "the manufacturer should take his place by the side of the agriculturist." From that time, for a period of thirty-six years, every chief magistrate, *elected by the people*, was from the planting States of the Union, and all of them elected by the same party that elected Mr. Jefferson, and each and every one of them was an advocate of the system which tended to bring the loom to the neighbourhood of the plough, and thus to make a market on the land for the products of the land. By the last of these, his views on this subject were forcibly expressed in a letter that has frequently been published, and from which the following is an extract:

"I will ask, what is the real situation of the agriculturist? Where has the American farmer a market for his surplus produce? Except for cotton, he has neither a foreign nor home market. Does not this clearly prove, when there is no market either at home or abroad, that there is too much labour employed in agriculture, and that the *channels for labour should be multiplied?* Common sense points out at once the remedy; draw from agriculture this superabundant labour, employ it in mechanism and manufactures, thereby creating a home market for your breadstuffs, and distributing labour to the most profitable account, and benefits to the country will result. Take from agriculture in the United States six hundred thousand men, women, and children, and you will at once give a home market for more breadstuffs than all Europe now furnishes us. In short, sir, we have been too long subject to the policy of British merchants. It is true that we should become a little more Americanized, and, instead of feeding the paupers and labourers of England, [as we do by sending there for her manufactures,] feed our own; or else, in a short time, by continuing our present [free trade] policy, we shall all be rendered paupers ourselves."—*President Jackson.*

At the close of that period there was a change of policy. Elected by the same party that had elected his predecessor, Mr. Van Buren adopted the policy which tends to the separation of the consumer from the producer, to the impoverishment of the land and its owner, and the maintenance of the monopoly system by which England had acquired the control of the movements of the world. The effects were disastrous, as may be seen by all who study the diagrams given in the third chapter, and the consequence was a political revolution. For the first time in forty years, a president was elected by the people not being of the party generally known as that of the Democrats. Democracy had changed sides, and the people did not go with it. The consequence of this was, nearly two years later, a return to the policy of protection and a restoration of prosperity, and with prosperity the party that had so long controlled the movements of the country was again restored to power. Unwilling, however, to acknowledge that the revolution of 1840 had been the consequence of an error of policy, they ascribed it to various minor and insignificant causes, and proceeded to the enaction of the tariff of 1846, and the consequence was another revolution by which the party of protection was again restored to power. Like the former, that revolution is now ascribed to minor causes; but those who will study the diagrams to which I have above referred can scarcely fail to see that it was due to the fact that the party styled Democratic had espoused a course of policy that tended to diminish the value of labour, to degrade the labourer, to depress the democracy at home, and to maintain the aristocracy abroad; nor can they, as I think, fail to arrive at the belief that no party adverse to protection can again hold power in this country. Such being the case, the interest of both parties, if actuated solely by purely selfish considerations, would lead to the advocacy of the same course of policy—the one in power desiring that it might not be adopted, and that thus they might profit by the agitation of the question for maintaining themselves in authority, and the one out of power, that it might be settled, and the agitation of the question brought to a close.

CONCLUSION.

MUCH is said of "the mission" of the people of these United States, and most of it is said by persons who appear to limit themselves to the consideration of the *powers* of the nation, and rarely to think of its *duties*. By such men the grandeur of the national position is held to be greatly increased by having expended sixty or eighty millions upon a war with a weak neighbour, and having thus acquired the power to purchase, at a high price, a vast body of wild land that would, in the natural course of events, have been brought within the Union, in reasonable time, without the cost of a dollar or a life. By such men, the fitting out of expeditions for the purpose of producing civil war among our neighbours of Cuba, is held to be another evidence of grandeur. Others would have us to mix ourselves up with all the revolutionists of Europe; while a fourth and last set sigh at the reflection that our fleets and armies are too small for the magnificence of our position.

By some it is supposed that our "mission" is that of monopolizing the commerce of the world, and the time is anxiously looked for when we shall have "diplomatic relations" with "vast regions of the East," Persia, Corea, Cochin-China, Burmah and Japan, with whom "nothing but the steam-ship can successfully introduce our commerce." By "persevering and successful efforts," it is thought we may secure the "commerce of Japan." That done,

"New York," it is thought, "would become the depôt and storehouse and entrepots of the world, the centre of business and exchanges, the clearing house of international trade and business, the place where assorted cargoes of our own products and manufactures, as well as those of all foreign countries, would be sold and reshipped, and the point to which specie and bullion would flow, as the great creditor city of the world for the adjustment of balances, as the factor of all nations and the point whence this specie would flow into the interior of our country through all the great channels of international trade and intercourse. With these great events accomplished, and with abundant facilities for the warehousing of foreign and domestic goods at New York, it must eventually surpass in wealth, in commerce, and population, any European emporium, whilst, as a necessary consequence, all our other cities and every portion of the Union and all our great interests, would derive corresponding advantages."—*Treasury Report, December*, 1848.

The cost of a mission to Japan would build half a dozen furnaces that would add more to the wealth of the nation in five years than the commerce of that country would do in half a century. The amount we have expended on the mission to Austria, in search of a market for tobacco, would bring here as many Germans as would consume almost as much of our tobacco as is now consumed in the empire, and those tobacco consumers would do more for the growth of New York than either Japan or Austria.

The English doctrine of "ships, colonies, and commerce" is thus reproduced on this side of the Atlantic, and its adoption by the nation would be followed by effects similar to those which have been already described as existing in England. There, for a time, it gave the power to tax the world for the maintenance of fleets and armies, as had before been done by Athens and by Rome, and there it is now producing the same results that have elsewhere resulted from the same system, poverty, depopulation, exhaustion, and weakness.

But little study of our history is required to satisfy the inquirer that the power of the Union, and its magnificent position among the nations of the earth, are due to the fact that we have to so great an extent abstained from measures requiring the maintenance of fleets and armies. The consequence has been that taxes have been light, capital has accumulated rapidly, labour

has been productive, and the labourer has received wages that have enabled him to feed, clothe, and educate his children, and the nation has thus performed its true "mission" in elevating the condition of man. If we desire to find exceptions to this, we must look to those periods in which the policy of Washington, Jefferson, Madison, Monroe, and Jackson, was departed from, and when the government adopted measures tending to the maintenance of the English monopoly of machinery, and there we shall find taxes more heavy, capital accumulating more slowly, labour more unproductive, and the wages of labour so much depressed that the labourer finds it difficult to feed or clothe his children, and still more difficult to educate them.

Two systems are before the world; the one looks to increasing the proportion of persons and of capital engaged in trade and transportation, and therefore to diminishing the proportion engaged in producing commodities with which to trade, with *necessarily* diminished return to the labour of all; while the other looks to increasing the proportion engaged in the work of production, and diminishing that engaged in trade and transportation, with increased return to all, giving to the labourer good wages, and to the owner of capital good profits. One looks to increasing the quantity of raw materials to be exported, and diminishing the inducements to the import of men, thus impoverishing both farmer and planter by throwing on them the burden of freight; while the other looks to increasing the import of men, and diminishing the export of raw materials, thereby enriching both planter and farmer by relieving them from the payment of freight. One looks to giving the *products* of millions of acres of land and of the labour of millions of men for the *services* of hundreds of thousands of distant men; the other to bringing the distant men to consume on the land the products of the land, exchanging day's labour for day's labour. One looks to compelling the farmers and planters of the Union to continue their contributions for the support of the fleets and the armies, the paupers, the nobles, and the sovereigns of Europe; the other to enabling ourselves to apply the same means to the moral and intellectual improvement of the sovereigns of America.* One looks to the continuance of that *bastard* freedom of trade which denies the principle of protection, yet doles it out as revenue duties; the other to extending the area of *legitimate* free trade by the establishment of perfect protection, followed by the annexation of individuals and communities, and ultimately by the abolition of custom-houses. One looks to exporting men to occupy desert tracts, the sovereignty of which is obtained by aid of diplomacy or war; the other to increasing the value of an immense extent of vacant land by importing men by millions for their occupation. One looks to the *centralization* of wealth and power in a great commercial city that shall rival the great cities of modern times, which have been and are being supported by aid of contributions which have exhausted every nation subjected to them; the other to *concentration*, by aid of which a market shall be made upon the land for the products of the land, and the farmer and planter be enriched. One looks to increasing the necessity for commerce; the other to increasing the power to maintain it. One looks to underworking the Hindoo, and sinking the rest of the world to his level; the other to raising the standard of man throughout the world to our level. One looks to pauperism, ignorance, depopulation, and barbarism; the other to increasing wealth, comfort, intelligence, combination of action, and civilization. One looks towards universal war; the other towards universal peace. One is the English system; the other we

* Russia is now raising by loan five millions of pounds sterling to pay the expenses of the war in Hungary. The farmers and planters of the Union are the chief contributors to this loan.

may be proud to call the American system, for it is the only one ever devised the tendency of which was that of ELEVATING while EQUALIZING the condition of man throughout the world.

SUCH is the true MISSION of the people of these United States. To them has been granted a privilege never before granted to man, that of the exercise of the right of perfect self-government; but, as rights and duties are inseparable, with the grant of the former came the obligation to perform the latter. Happily their performance is pleasant and profitable, and involves no sacrifice. To raise the value of labour throughout the world, we need only to raise the value of our own. To raise the value of land throughout the world, it is needed only that we adopt measures that shall raise the value of our own. To diffuse intelligence and to promote the cause of morality throughout the world, we are required only to pursue the course that shall diffuse education throughout our own land, and shall enable every man more readily to acquire property, and with it respect for the rights of property. To improve the political condition of man throughout the world, it is needed that we ourselves should remain at peace, avoid taxation for the maintenance of fleets and armies, and become rich and prosperous. To raise the condition of woman throughout the world, it is required of us only that we pursue that course that enables men to remain at home and marry, that they may surround themselves with happy children and grand-children. To substitute true Christianity for the detestable system known as the Malthusian, it is needed that we prove to the world that it is population that makes the food come from the rich soils, and that food tends to increase more rapidly than population, thus vindicating the policy of God to man. Doing these things, the addition to our population by immigration will speedily rise to millions, and with each and every year the desire for that perfect freedom of trade which results from incorporation within the Union, will be seen to spread and to increase in its intensity, leading gradually to the establishment of an empire the most extensive and magnificent the world has yet seen, based upon the principles of maintaining peace itself, and strong enough to insist upon the maintenance of peace by others, yet carried on without the aid of fleets, or armies, or taxes, the sales of public lands alone sufficing to pay the expenses of government.

To establish such an empire—to prove that among the people of the world, whether agriculturists, manufacturers, or merchants, there is perfect harmony of interests, and that the happiness of individuals, as well as the grandeur of nations, is to be promoted by perfect obedience to that greatest of all commands, "Do unto others as ye would that others should do unto you,"—is the object and will be the result of that mission. Whether that result shall be speedily attained, or whether it shall be postponed to a distant period, will depend greatly upon the men who are charged with the performance of the duties of government. If their movements be governed by that enlightened self-interest which induces man to seek his happiness in the promotion of that of his fellow-man, it will come soon. If, on the contrary, they be governed by that ignorant selfishness which leads to the belief that individuals, party, or national interests, are to be promoted by measures tending to the deterioration of the condition of others, it will be late.

INSECTS INJURIOUS TO VEGETATION.

REPORT ON THE

INSECTS OF MASSACHUSETTS INJURIOUS TO VEGETATION, BY THADDEUS WM. HARRIS.

On undertaking to conduct a periodical designed to be useful, not only by illustrating practical Agriculture and detailing the result of actual experiments in the field, but by exhorting young farmers to extend the range of their reading and to cultivate a fondness for the study of sciences and literature that bear relation to practical Agriculture, we considered it to be one of our first duties to recommend, in the strongest terms we could employ, the *study of Entomology*, or the character and habits of *Insects*. For motives to prompt the young farmer to this field of investigation, we need go no farther than to the very first sentence in the book before us—a work which we earnestly commend on its own merits, and for the benefit of the agriculturist, and not to serve any interest of either author or publisher.

"The benefits which we derive from insects," says Doctor Harris, "though neither few in number nor inconsiderable in amount, are, if we except those of the silk-worm, the bee and the cochineal, not very obvious, and are wholly beyond our influence. On the contrary, the injuries that we suffer from them are becoming yearly more apparent, and are more or less within our control. Before suitable remedies can be discovered and effectually applied, it is necessary that our insect enemies should be recognized, and their habits generally known."

This account of the insects injurious to vegetation in Massachusetts, which appears to have been prepared under instructions from Governor Everett, is doubtless applicable in a great degree to the whole Union. The very suggestion of such a work showed enlarged and liberal views on the part of a Chief Magistrate of a State, and is enough, in connection with the general knowledge of *his* various and elegant attainments, to warrant the supposition or inquiry whether these instructions themselves would not have formed an interesting preface or appendage to a performance which in our humble opinion seems to have been executed with the judgment and zeal of a disinterested naturalist and accomplished scholar.

As to the general plan of the work, the author observes—

"While I have not thought it expedient to avoid the use of a scientific classification, and have even been at some pains to point out the characters on which this classification is founded, and the peculiarities of the various groups of insects under consideration, it has been my endeavor to treat the subject in a plain and familiar way. No more of the technical language of Entomology has been introduced, than was absolutely necessary to define and discriminate the different insects, whose transformations are described, and in most cases the scientific names and terms have been explained whenever they occurred."

The following passages are all for which we can find room; but these are full of instruction for those who have not turned their attention to this interesting branch of Natural History, and will of themselves awaken the young reader to some sense of the vast field which displays itself for his amusement and instruction—one for which he has no distance to travel, for it is open to him on every side, with objects innumerable to occupy in the most agreeable manner many moments of leisure for which the uninstructed can find no employment, and hence are liable every day to be overcome with listless ennui.

> "The primrose by the river's brim
> A simple primrose is to him,
> And it is nothing more."

As this Report is designed for the use of persons who may not have elementary and other works on this branch of Natural History at their command, it may be proper to begin with some brief remarks on insects in general, in order to show how they are formed, and wherein they differ essentially from other animals.

The word *Insect*,* which, in the Latin language, whence it was derived, means cut into or notched, was designed to express one of the chief characters of this group of animals, whose body is marked by several cross-lines or incisions. The parts between these cross-lines are called segments or rings, and consist of a number of jointed pieces, more or less movable on each other.

Insects have a very small brain, and, instead of a spinal marrow, a kind of knotted cord, extending from the brain to the hinder extremity; and numerous small, whitish threads, which are the nerves, spread from the brain and knots, in various directions. Two long air-pipes, within their bodies, together with an immense number of smaller pipes, supply the want of lungs, and carry the air to every part. Insects do not breathe through their mouths, but through little holes, called spiracles, generally nine in num-

* *Insectum* is an abbreviation of *intersectum*; and from the same source we have the word intersect, to cut or divide.

ber, along each side of the body. Some, however, have the breathing-holes placed in the hinder extremity, and a few young water-insects breathe by means of gills. The heart is a long tube, lying under the skin of the back, having little holes on each side for the admission of the juices of the body, which are prevented from escaping again by valves or clappers, formed to close the holes within. Moreover, this tubular heart is divided into several chambers, by transverse partitions, in each of which there is a hole shut by a valve, which allows the blood to flow only from the hinder to the fore part of the heart, and prevents it from passing in the contrary direction. The blood, which is a colorless or yellowish fluid, does not circulate in proper arteries and veins; but is driven from the fore part of the heart into the head, and thence escapes into the body, where it is mingled with the nutritive juices that filter through the sides of the intestines, and the mingled fluid penetrates the crevices among the flesh and other internal parts, flowing along the sides of the air-pipes, whereby it receives from the air that influence which renders it fitted to nourish the frame, and maintain life.

All insects are produced from eggs, and none are spontaneously generated from putrid animal or vegetable matter. A few insects, such as some plant-lice, do not lay their eggs, but retain them within their bodies till the young are ready to escape. Other insects invariably lay their eggs where their young, as soon as they are hatched, will find a plentiful supply of food immediately within their reach.

Most insects, in the course of their lives, are subject to very great changes of form, attended by equally remarkable changes in their habits and propensities. These changes, transformations, or *metamorphoses*, as they are called, might cause the same insect, at different ages, to be mistaken for as many different animals. For example, a caterpillar, after feeding upon leaves till it is fully grown, retires into some place of concealment, casts off its caterpillar skin, and presents itself in an entirely different form, one wherein it has neither the power of moving about, nor of taking food; in fact, in this its second or chrysalis state, the insect seems to be a lifeless, oblong, oval or conical body, without a distinct head, or movable limbs; after resting a while, an inward struggle begins, the chrysalis skin bursts open, and from the rent issues a butterfly, or a moth, whose small, flabby wings soon extend and harden, and become fitted to bear away the insect in search of the honeyed juice of flowers and other liquids that suffice for its nourishment.

The little fish-like animals that swim about in vessels of stagnant water, and devour the living atoms that swarm in the same situations, soon come to maturity, cast their skins, and take another form, wherein they remain rolled up like a ball, and either float at the surface of the water, for the purpose of breathing through the two tunnel-shaped tubes on the top of their backs, or, if disturbed, suddenly uncurl their bodies, and whirl over and over from one side of the vessel to the other. In the course of a few days these little water-tumblers are ready for another transformation; the skin splits on the back between the breathing-tubes, the head, body, and limbs of a musketo suddenly burst from the opening, the slender legs rest on the empty skin till the latter fills with water and sinks, when the insect abandons its native element, spreads its tiny wings, and flies away, piping its war-note, and thirsting for the blood which its natural weapons enable it to draw from its unlucky victims.

The full-fed maggot, that has rioted in filth till its tender skin seems ready to burst with repletion, when the appointed time arrives, leaves the offensive matters it was ordained to assist in removing, and gets into some convenient hole or crevice: then its body contracts or shortens, and becomes egg-shaped, while the skin hardens, and turns brown and dry, so that, under this form, the creature appears more like a seed than a living animal; after some time passed in this inactive and equivocal form, during which wonderful changes have taken place within the seed-like shell, one end of the shell is forced off, and from the inside comes forth a buzzing fly, that drops its former filthy habits with its cast-off dress, and now with a more refined taste, seeks only to lap the solid viands of our tables, or sip the liquid contents of our cups.

Caterpillars, grubs, and maggots undergo a complete transformation in coming to maturity; but there are other insects, such as crickets, grasshoppers, bugs, and plant-lice, which, though differing a good deal in the young and adult states, are not subject to so great a change, their transformations being only partial. For instance, the young grasshopper comes from the egg a wingless insect, and consequently unable to move from place to place, in any other way than by the use of its legs; as it grows larger it is soon obliged to cast off its skin, and, after one or two moultings, its body not only increases in size, but becomes proportionally longer than before, while little stump-like wings begin to make their appearance on the top of the back. After this, the grasshopper continues to eat voraciously, grows larger and larger, and hops about without any aid from its short and motionless wings, repeatedly casts off its outgrown skin, appearing each time with still longer wings, and more perfectly formed limbs, till at length it ceases to grow, and, shedding its skin for the last time, it comes forth a perfectly formed and matured grasshopper, with the power of spreading its ample wings, and of using them in flight.

Hence there are three periods in the life of an insect, more or less distinctly marked by corresponding changes in the form, powers and habits. In the first, or period of infancy, an insect is technically called a *larva*, a word signifying a mask, because therein its future form is more or less masked or concealed. This name is not only applied to grubs, caterpillars, and maggots, and to other insects that undergo a complete transformation, but also to young and wingless grasshoppers, and bugs, and indeed to all young insects before the wings begin to appear. In this first period, which is generally much the longest, insects are always wingless, pass most of their time in eating, grow rapidly, and usually cast off their skins repeatedly. The second period, wherein those insects that undergo a partial transformation, retain their activity and their appetites for food, continue to grow, and acquire the rudiments of wings, while others at this age, entirely lose their larva form, take no food, and remain at rest in a death-like sleep—is called the *pupa* state, from a slight resemblance that some of the latter present to an infant trussed in bandages, as was the fashion among the Romans. The pupæ from caterpillars, however, are more commonly called chrysalids, because some of them

as the name implies, are gilt or adorned with golden spots; and grubs, after their first transformation, are often named nymphs, for what reason does not appear. At the end of the second period insects again shed their skins, and come forth fully grown, and (with few exceptions) provided with wings. They thus enter upon their last or adult state, wherein they no longer increase in size, and during which they provide for a continuation of their kind. This period usually lasts only a short time, for most insects die immediately after their eggs are laid. Bees, wasps, and ants, however, which live in society, and labor together for the common good of their communities, continue much longer in the adult state.

In winged or adult insects, two of the transverse incisions, with which they are marked, are deeper than the rest, so that the body seems to consist of three principal portions, the first whereof is the head, the second or middle portion of the thorax, or chest, and the third or hindmost the abdomen, or hind-body. In some wingless insects these three portions are also to be seen; but in most young insects, or larvæ, the body consists of the head, and a series of twelve rings of segments, the thorax not being distinctly separated from the hinder part of the body, as may be perceived in caterpillars, grubs, and maggots.

The eyes of adult insects, though apparently two in number, are compound, each consisting of a great number of single eyes closely united together, and incapable of being rolled in their sockets. Such also are the eyes of the larvæ, and of the active pupæ of those insects that undergo an imperfect transformation. Moreover, many winged insects have one, two, or three little single eyes, placed near each other on the crown of the head, and called *ocelli*, or eyelets. The eyes of grubs, caterpillars, and of other completely transforming larvæ, are not compounded, but consist of five or six eyelets clustered together, without touching, on each side of the head; some, however, such as maggots, are totally blind. Near to the eyes are two jointed members, named *antennæ*, corresponding, for the most part, in situation, with the ears of other animals, and supposed to be connected with the sense of hearing, of touch, or of both united. The antennæ are very short in larvæ, and of various sizes and forms in other insects.

The mouth of some insects is made for biting, that of others for taking food only by suction. In biting insects the parts of the mouth, which are variously modified to suit the nature of the food, are these: an upper and an under lip, two nippers or jaws on each side, moving sidewise, and not up and down, and four or six little jointed members, called *palpi* or feelers, whereof two belong to the lower lip, and one or two to each of the lower jaws. The mouth of sucking insects consists essentially of these same parts, but so different in their shape and in the purposes for which they are designed, that the resemblance between them and those of biting insects is not easily recognized. Thus the jaws of caterpillars are transformed to a spiral sucking-tube in butterflies and moths, and those of maggots to a hard proboscis, fitted for piercing, as in the musketo and horse-fly, or to one of softer consistence, and ending with fleshy lips for lapping, as in common flies; while in bugs, plant-lice, and some other insects resembling them, the parts of the mouth undergo no essential change from infancy to the adult state, but are formed into a long, hard, and jointed beak, bent under the breast when not in use, and designed only for making punctures and drawing in liquid nourishment.

The parts belonging to the thorax are the wings and the legs. The former are two or four in number, and vary greatly in form and consistence, in the situation of the wing-bones or veins, as they are generally called, and in their position or the manner in which they are closed or folded when at rest. The under-side of the thorax is the breast, and to this are fixed the legs, which are six in number in adult insects, and in the larvæ and pupæ of those that are subject only to a partial transformation. The parts of the legs are the hip-joint, by which the leg is fastened to the body, the thigh, the shank (*tibia*), and the foot, the latter consisting sometimes of one joint only, more often of two three, four or five pieces (*tarsi*), connected end to end, like the joints of the finger, and armed at the extremity with one or two claws. Of the larvæ that undergo a complete transformation, maggots and some others are destitute of legs; many grubs have six, namely a pair beneath the under-side of the first three segments, and sometimes an additional fleshy prop-leg under the hindmost extremity; caterpillars and false caterpillars have, besides the six true legs attached to the first three rings, several fleshy prop-like legs, amounting sometimes to ten or sixteen in number, placed in pairs beneath the other segments.

The abdomen or hindmost, and, as to size, the principal part of the body, contains the organs of digestion, and other internal parts, and to it also belong the piercer and the sting with which many winged or adult insects are provided. The piercer is sometimes only a flexible or a jointed tube, capable of being thrust out of the end of the body, and is used for conducting the eggs into the crevices or holes where they are to be laid. In some other insects it consists of a kind of scabbard, containing a central borer, or instruments like saws, designed for making holes wherein the eggs are to be inserted. The sting, in like manner, consists of a sheath enclosing a sharp instrument for inflicting wounds, connected wherewith in the inside of the body is a bag of venom or poison. The parts belonging to the abdomen of larvæ are various, but are mostly designed to aid them in their motions, or to provide for their respiration.

An English entomologist has stated, that, on an average, there are six distinct insects to one plant. This proportion is probably too great for our country, where vast tracts are covered with forests, and the other original vegetable races still hold possession of the soil. There are above 1200 flowering plants in Massachusetts, and it will be within bounds to estimate the species of insects at 4800, or in the proportion of four to one plant. To facilitate the study of such an immense number, some kind of classification is necessary; it will be useful to adopt one, even in describing the few species now before us. The basis of this classification is founded upon the structure of the mouth, in the adult state, the number and nature of the wings, and the transformations. The first great divisions are called orders, of which the following seven are very generally adopted by naturalists.

It appears to us that every intelligent farmer would find the above-named Report a valuable acquisition to his library. On no subject con-

nected with Agriculture is there so little accurate knowledge diffused among the mass of farmers. An acquaintance with Doctor Harris's book will save them much anxiety and many fruitless efforts, besides serving to beget and to gratify a taste for researches that will impress him with the truth of the remark by another modern and most able foreign writer on the same subject, that, "Whatever many may say of Nature growing old, the naturalist finds her always young and beautiful, always estimable—just as she came from the hand of her Creator, and as she indeed every moment issues afresh from the hand of the Almighty Being. In his hand the youth of Nature is continually renewed; and under his all-ruling Providence, all the millions of apparently distinctive beings only labor in preserving her existence and embellishment." This able Report appears to have been published agreeably to an order of the Legislature of Massachusetts, by the Commissioners of the Zoological and Botanical Survey of the State, and is, we believe, 'out of print.'

FRUIT-TREE BORDERS.

[From the London Gardener's Chronicle, 27th Dec. 1845.]

NOTHING can be of greater importance to a country gentleman than a flourishing and productive garden; and if proper means are allowed, there can be no reason why this should not be the case. True, there are adverse situations and soils, opposed in some degree to the quality of their productions; but gardening is an art, and he who aspires at a masterly knowledge of that art, by dexterity and perseverance renders every opposing object subservient to his skill. A thorough and enthusiastic cultivator of the soil reduces its obstinacy, corrects its barrenness, and causes the bark-bound, stunted trees to assume a living and vigorous appearance. It may be assumed that these are hidden and abstruse matters, which belong exclusively to science, but we deny it; good gardeners know all this, and bad ones should set about learning without delay. Let such begin by casting off their prejudices; let them take their stand by the side of the inquiring and industrious, and their course and success are alike clear.

All Fruit-Trees, of whatever kind, should be planted on shallow ground, more especially if the quality of the soil is adhesive. As a first principle, the border should be dry; and, if not naturally so, drainage, complete and efficient, must be introduced. The drainage must, from its depth, entirely prevent the roots from getting beyond it. The soil between the drainage and the atmosphere should be rendered friable by exposure to the elements, and when it partakes of considerable tenacity I would urgently recommend an admixture of stones, flints, brickbats, or any similar material, say to the extent of one-fourth. These will enable the rains to percolate freely through the body of earth in which the roots are. They will also in dry weather hold moisture, and tend greatly to maintain the border in an equable state. The roots under such circumstances will be satisfactorily placed; no water can remain or be held in the soil sufficiently long to prove injurious: the stones intermixed with the soil will allow it freely to pass into the drainage beneath, where preparation must have been made for its passing readily off.

No kind of fruit-bearing tree should ever be planted deep, the proper position of the roots in planting is to stretch them carefully on the surface of the border, then to cover them loosely with soil to the depth of three inches; on this lay a slight covering of decayed leaves, merely to protect them from drying winds until the roots are perfectly established in the soil. The roots are certain to find their way downward, but when they are down they are not so likely to find their way toward the surface.

Fruit-tree borders should never be dug with the spade. The surface may be stirred and kept open with the fork, and then merely for the purpose of loosening the soil. The roots should be encouraged to the surface by the application of dressings of decomposed leaves. Wood-ashes will occasionally prove useful, and so will soot. These encourage the kind of wood likely to prove productive, and the produce is entirely different, both as regards size and quality, from that where heavy dressings of stable manure are applied, particularly when the borders are imperfectly drained, and the soil of considerable adhesiveness. Manure dug into borders thus circumstanced is only increasing the evil. The soil is constantly wet and spongy. The roots are surrounded with unhealthy fluid; the air never penetrates beyond the surface; consequently, rank and barren wood, in large quantities, is annually, and to no useful purpose, produced. The roots should never be allowed, if it can possibly be avoided, to get beyond the reach of atmospheric influences. It is in such a position alone that they can procure and assimilate the kind of aliment indispensable to the fruitfulness of the trees. When the borders are imperfectly drained, the fruit produced is not only small in quantity, but of inferior quality, and not fit for dessert or kitchen use, compared with such as is grown on dry and healthy soil. Where the situation is bad, it should not by bad gardening be made worse; every means should be adopted to modify an evil, of itself of sufficient magnitude. I should hope that nobody would ever think of planting trees in future without a complete examination of the condition of the soil, and particularly the subsoil, in order, if necessary, to apply those remedies which skillful gardening may suggest; and surely there is sufficient skill and talent among us to meet, if brought into the field, all the exigencies of the case.

ONE WHO HAS HANDLED THE SPADE.

CULTURE OF THE GRAPE.

As public attention at the present time seems to be somewhat enlisted in the culture of the grape, and as its success is pretty well established in the vicinity of Cincinnati, where it is rapidly extending, a brief sketch of the most approved mode of establishing a vineyard may be acceptable to some of your readers.

The first step then, is the preparation of the ground. The sides or tops of limestone hills are generally chosen for the location, where the water runs off readily. South and south-eastern exposures are the best in this climate. Three modes of preparing the ground are usually adopted here. The first consists merely in deep plowing, with a common plow, as for potatoes, and making the surface fine and mellow with the harrow. The second method goes one step farther, and a second furrow is cut in the bottom of the first; in the bottom of the second furrow a subsoil plow is run, which breaks the ground, altogether, to the depth of sixteen or eighteen inches; it is then harrowed and prepared as in the first. The third method is by thoroughly trenching with the spade, to the depth of not less than two feet. If the hill-side is steep, (say at an elevation of twenty or thirty degrees with the horizon,) terraces are also raised from two to four feet in hight, and extending up the hill from twenty to sixty feet each, according to the acclivity of the surface. By this last mode, the top soil is all thrown into the bottom of the trenches, and the subsoil, which is generally clayey, thrown upon the top, and left sufficiently smooth for planting. Where stones are found in the soil, they are thrown out on the surface, as the trenching progresses up the hill, and if in sufficient quantity, are laid up in walls to support the terraces. The terraces are made to run horizontally along the hill side, or nearly so, with an open ditch for a drain at the upper edge of each terrace, and a similar horizontal ditch as often as once in eighty or a hundred feet, where the ground is not terraced. These drains should lead to the lowest point in the vineyard, where a suitable drain should be constructed down the hill to carry off the surplus water in heavy showers, and may be covered like a culvert, or left open. In each case the vines are planted in rows, four feet apart if to be worked with the hoe and spade, and from five to six feet if to be worked with the plow or cultivator, and should always run horizontally with the terraces and drains. The distance between the vines in the row varies from two and a half to four feet, according to the mode of training which is to be adopted.

Cuttings of the vine, with three or four eyes, are sometimes planted, at proper distances, in the vineyard; but the usual practice is, to plant them first in a nursery, in rows, about eighteen inches apart, and from four to six in a row, to strike root; here they are to be well cultivated, and allowed to grow one or two years, when they are taken up in the spring and planted out in the vineyard. The fourth year from the cuttings, (that is, after they have had three summers' growth—two in the nursery and one in the vineyard,) they may be allowed to bear a full crop, or nearly as much as they ever should be allowed to bear thereafter; which is about one-fourth of a peck of grapes to each vine. One acre of ground, planted six feet by three apart, will contain about twenty-four hundred vines; consequently will yield about one hundred and fifty bushels of well-assorted grapes, which will make three hundred gallons of wine—sometimes a little more. An acre of good ground, well trenched, and planted with Catawba vines, after it has acquired six or seven years' growth, may be made to yield a much greater quantity; and some small vineyards below Cincinnati, on the hills of the Ohio river, have produced at the rate of eight hundred gallons per acre; but the vines were planted four feet each way, making twenty-six hundred and forty vines to the acre; but the proprietor admitted that his vines were injured by overbearing, and that his wine was inferior in quality when allowed to produce that quantity.

I give three hundred gallons as the full average quantity of wine made to the acre in the neighborhood of Cincinnati. Of course, much variation will depend upon the manner of establishing a vineyard, and its subsequent treatment.

The comparative merits of the different modes of preparing the ground for a vineyard cannot, as yet, be settled by experience in this part of the country, as the oldest vineyard, I believe, has not been established more than twelve or thirteen years. Vineyards planted at Vevay, in Indiana, by the Swiss, merely on deeply plowed ground, failed in fifteen years. When the ground is plowed eighteen inches deep, it may bear tolerably well for twenty years; but a vineyard planted on ground well trenched two feet deep, and properly drained and cultivated, may be expected to last fifty or one hundred years—perhaps more. The crop, also, is much more certain when the ground is well trenched, not being so liable to suffer from drouths or rainy seasons.

The advantages of deep trenching have become so apparent to those who have had the most experience, that nearly all who can afford it are now preparing their ground in this manner, although done at an expense varying from eighty to one hundred and twenty-five dollars per acre, according to the character of the ground. This, with the addition of twenty-four hundred vines, at sixty dollars per thousand for one-year old vines, (the customary price in this market,) with the cost of planting, will make the expense of one acre, exclusive of land, stakes, &c. at least three hundred dollars, or, without trenching, about two hundred.

S. MOSHER.

THE GENUINE ARABIAN HORSE.

"Oh, give me back my Arab steed."

THERE are romantic associations with the very mention of the Arabian horse, in the mind of every lover of that noble animal. No animal has been described by writers with a freer play of the imagination. We recollect to have heard the celebrated Captain Riley portraying the figure and powers of one he saw in Arabia. In passing, he said, through a thicket, where the road was winding, the noble animal disdained to pursue its tedious serpentine course, but instead of that, took a straight direction and *trotted over bushes* four feet high without touching them. But the Captain had a marvellous control over facts.

An interesting article might be made by a recital of the remarkable accounts of their action and endurance, some of them doubtless true as well as extraordinary.

One of the most particular and authoritative descriptions is probably the following from the Memoirs of Sir James Campbell:

The route of the caravan lay at first through the Great Desert of Syria, and then through the country of Hamah, the most celebrated in the world for its breed of horses; and this was a circumstance peculiarly agreeable to me, as I was desirous of all things to carry home with me a horse of that unequaled race. The purity of the breed is ascertained and preserved in this country with greater precision and facility, in consequence of the horses and mares, to the number of one hundred and upward, being uniformly held in common property, by a particular family or tribe. The line of succession is preserved with all the care and and all the accuracy perhaps of a Welsh pedigree: and in the genealogical tree of the horse which I ultimately purchased, its descent was professedly traced to the famous black mare of Mahomed, and I had a certificate of the fact, subscribed by five or six sheiks, who have an obvious interest in keeping up the value of their breed of horses by this exactness in their pedigree.

It is on the mares, however, that the chief value is placed, and through them it is that purity of blood is most depended on. The sister of the horse which I brought home with me, was for sale at the time I made the purchase. I examined her with the greatest care, and could not detect a semblance of a fault in any one of her points. Like all the others of the race, she was under fifteen hands high; and the price put upon her by the tribe to which she belonged was 10,000 piasters, equal to £2,500 of our money. The value of the mare is always much greater than that of a horse of equal symmetry, from the idea of her greater influence in preserving the purity of the race. The price I paid for the horse, own brother to this mare, was 800 Venitian sequins, equal to about £400 sterling; and I am inclined to think it was not far out of proportion, according to their ideas, to the price of the other.

While I was yet in the district where these horses are bred, an agent arrived from the King of Prussia, commissioned to make purchases for His Majesty. He agreed with me in admiring the mare, and declared she was the handsomest animal he had ever seen. He was even willing to give the 10,000 piastres for her, but the tribe had come to the resolution of preserving her as a brood mare, and refused that sum when offered. It is to be observed, however, that there are two distinct races in the country, the noble and the common. Among the latter, many beautiful horses are often to be found, but they never possess those qualities in perfection for which the noble race of Arabia is so peculiarly distinguished—fleetness, wind, and bottom.

Here, too, I must observe that the horses brought from Barbary are not to be compared in any good quality with the noble breed of Hamah. Many of the Barbs have radical faults, and some of them are very ugly, goose-rumped, cat-hammed, and narrow-chested. The difference of the breeds was long unknown in this country, but now it is better understood, and a Barb I believe is seldom bred from.

I shall here mention a circumstance on the authority of persons in that country whose good faith and respectability I had no reason to doubt, as illustrating in rather a striking point of view the marked distinction between the different races of this noble animal, which are reared in the same district.

An Arab who had pitched his tent in a solitary spot of the desert, had occasion to

leave his family, with his stock of the common breed of horses and mares, for a single night. On his return to the place in the morning, he found that his family and his whole property had been carried off in the night. He was mounted on a horse of the noble breed, and of the highest qualities, and having a rifle with him, he set out alone in pursuit of the robbers. On coming up with them he found that their numbers were considerable, but he had reason to believe that they were not possessed of fire-arms, which proved to be the fact.

Approaching near enough to bring them within range of his gun, he fired and wounded one or more of them, and waving his hand he dared them to follow him. This they attempted, but found it fruitless. He then returned to the attack, and again succeeded in singling out one or two of them with his rifle. Once more they pursued him with the fleetest of their horses, but to overtake him was impossible. Thus he hung upon their rear, wounding and killing several of them, until he at length compelled them to restore the booty.

The accoutrements of the Arab horsemen are simple in their construction, and well suited to his wants. The saddle is generally large, and always easy to ride on. The straps are made of untanned leather, and are fastened without buckles. A ring is attached to the end of the girth, and another to a corresponding part of the saddle. Through these rings a strap is repeatedly passed, and drawn together with such force as to bring them near to each other, after which, the strap is fastened by twisting the ends round the part thus tightened. The saddle thus fixed is never displaced, and, indeed, seldom taken off, except for the temporary purpose of grooming, when it is again immediately replaced, although there be no intention of riding. Cruppers are seldom used, because they are not necessary to keep the saddle in its place, and because they never carry anything behind it. The shoes are a thin flat piece of iron, with a hole in the middle to keep the foot cool, something in the form of our common bar shoe, but extremely light, and even flexible, so as to yield with the foot when pressed upon a stone. The numerous diseases to which our horses are liable are scarcely known in these countries.

Sometimes, indeed, I have seen a lame horse, but upon inquiry, the cause was generally to be traced to some accident, either in a skirmish, or from riding violently, which they do without hesitation over the roughest ground. Although never a very timorous rider, I have frequently felt somewhat uneasy at the style in which they carried me over a country which the boldest rider in England would hesitate to follow. In going down a declivity not less, perhaps, than forty-five degrees, where stones as large as a table were scattered about in all directions, I was proceeding with some caution to guide my horse over the difficulties of the ground, when an Arab called out to me, and I was induced ever afterward to follow the advice, "Give him his head, he sees the stones as well as you do."

Everybody has seen the Turkish bridle; they never use a curb, but the ring which is put into the mouth serves the same purpose; the bit, which is very light, acting so powerfully, by means of the lever attached to it, as to force the mouth open and keep it so; neither do they ever use the snaffe, or bridoon; I tried it in the hope of its easing the mouth, but to horse and rider it proved equally inconvenient. Although they use such powerful bridles, the Arabs ride with a heavy hand, so as to sustain the horse in advancing, and to curb him in action. This they are able to do very effectually, and in throwing the jereed it is absolutely necessary. Perhaps the most remarkable point about the Arabian horse is the extraordinary smallness of the head and mouth—so small, indeed is the latter that you would think they might use a common tumbler for a water-bucket.

The stirrup used by the Arab is singularly short, but the seat of the rider is not on that account the less secure, and it enables him, in rising on his stirrup to throw the jereed, or to strike a blow, to do it with an infinitely increased effect. The sudden jerk which is often given in these exercises to the stirrup-leather, makes it necessary to secure it much more firmly than we do. This is done by ten or twelve straps or thongs, and the stirrup, in place of being a narrow bar, is so constructed as to allow the whole foot to rest on a plate of iron reaching from the toe to some distance behind the heel, where it is sharpened so as to serve the purposes of a spur.

The Arab feels that his safety depends on the quality of his accoutrements, and this is a point to which his attention is constantly directed. In action they never dismount, so that when you see a horse during an engagement without a rider, you may conclude that he is killed or badly wounded. In the hands of a European unaccustomed to the habits of the Arab horse, unacquainted with the manner of treating him, the animal appears to be extremely vicious, but let the same horse be mounted by a native horseman, and he will be found to be gentle, docile, and obedient.

I need say nothing of the sabre, which is their favorite weapon, and is always light and handy, of a curved form, and of considerable strength, the best being made at Damascus. But the use of the jereed is not so much known: its length is about four feet, with a steel head, well-tempered and well sharpened. It is used as a missile, and four of them are generally carried in a small case under the thigh of the horseman, so as to enable him to seize one of them very quickly, and the case is fastened to the saddle by loops behind and before.

THE HISTORY OF A MAN AND HIS NURSERY.

"The evil which every man feels will be enough to disturb and harrass him if he does not know how much he escapes. The lustre of diamonds is invigorated by the interposition of darker bodies; the lights of a picture are created by the shades."

We know not when we have perused anything with livelier interest than that which was felt in reading the following plain story of a man and his nursery. What a lesson it teaches of courage and manly perseverance under difficulties! Read it, ye sluggards, who in full health, and sometimes possessing hundreds of acres, are yet ready to give up in despair, and for relief, would put on the menial livery of office, or worse, if possible, fly to the grog shop or the gaming table, instead of a manly reliance on your own exertions, seeing, as here you may see, under what trials, and even severe bodily afflictions, a man of spirit may accomplish all that is needed for rational enjoyment. Who can doubt that Wilson, on the fruit of his own raising, and the milk of his "one cow," eats as hearty meals, digests as well, and sleeps sounder, than many a rich nabob, whose mind is corroded with anxiety, and whose very dreams are disturbed with the fear that he may not die richer than his neighbor?

For ourselves, desirous as we have ever been, to spread the knowledge of whatever may transpire that is really new and instructive, in the way of progressive practical agriculture; we yet confess to the greater pleasure we sometimes find, in presenting to our young readers occasionally, examples such as is here exhibited, of moral firmness and successful bearing up, under a load of difficulties, apparently insupportable. The lesson may be as useful, even in the practical business of life, as the sight of a fat sheep, or a more than the "thrice told tale" of how to fatten an acre of land.

And here again we take occasion to repeat, what is worthy of note elsewhere, that in N. England, where consumers employed in other industries, are close by the producers employed at the plough, a great number of farmers find profitable amusement in raising their own little nurseries of fruit trees. If they do not graft and bud them themselves, as most of them do at least for their own use, they have always enough for themselves, and the residue are ready to be sold to professed nursery-men, who are thus saved the time and trouble of raising them from the seed. But where fruit is most abundant, there is the very place, be it borne in mind, where public taste most demands that it be *good*. The very *presence* of customers, in this as in other cases, promotes at once, both consumption and improvement. Thus, *in* New England, where a man on a farm of forty or fifty acres, will realize more from his orchard, than in some other parts of the country is realized from the staple crops of a farm of five hundred; there, to be saleable, fruit *must be good*, and that which is good, will always command ready sale and a good price. They say, "a good sized apple tree of *choice* fruit will frequently produce more profit than an acre of corn, or rye, or oats, and every tree that is sound and thrifty may, by ingrafting, in half dozen years, be made to yield good crops of valuable fruit."* It requires, say they, "little more care to raise a Baldwin, a Greening or Russet apple tree, than it does an insignificant seedling—the fruit of one worth from fifty cents to a dollar a bushel for winter, the other from eight to twelve cents, for vinegar or to feed stock." But enough, says the reader, in the way of mere introduction

* For the profits of fruit culture in New England, and the true causes of the decay of orchards and gardens in the "free trade" states, the reader is referred to another article in this number.

to your story of Mr. Wilson and his nursery—so we have only to add the promise that we shall not fail to bear in mind the importance of the best instruction in regard to the rearing and management of fruit and fruit trees—and the more especially, as we hope the time is fast approaching that the presence of manufacturers of leather, cloth, glass and iron, and the immense addition which may be made to their productive capacity by the use of steam and railroads, and otherwise, will teach land holders of five hundred acres in the middle and southern states, what may be done, as is here shown, *even on an acre and a quarter!* But this they will never learn as long as they continue to import millions of dollars worth of wool, flour and beef, in the form of English cloth and English iron, made there by labor just kept at the point of not quite starving to death, while their own immense sheep pastures lie waste, and their own coal and iron lie buried in the bowels of the earth.

SIMEON L. WILSON'S STATEMENT.

Having been favored with a visit from the committee on farms, and requested by them to make a statement of facts relating to my place, it is with pleasure I comply with their request. I suppose their attention was attracted to it by the peculiar circumstances under which I have labored, in bringing a barren piece of land to its present fertility. I will briefly state the particulars. At the age of thirteen years I became a cripple, by a white swelling on my knee, which caused me to lose the use of that joint. I at first got about upon crutches; afterwards with only a cane, and finally without the aid of either. And whilst I was buoyed up with the hope of again getting well of my lameness, or nearly so, I was afflicted with a paralytic stroke, which caused me to lose the use of the other leg very suddenly. This took place in 1831, when at the age of twenty-two years; since that time I have not been able to walk one step. At first this affliction seemed to dishearten me, and I came near giving up in dismay. But hope predominated, and I made a vigorous effort to obtain a livelihood by my own industry. Not having any trade, I commenced closing shoes. By applying myself very closely to my business, working early and late, I succeeded in obtaining a sufficient sum of money to purchase one acre and sixty rods of land, near Methuen village. With a little assistance, I soon had a house on the same, into which my parents moved in the fall of 1836. This piece of land, although but small, has a variety of soil, viz.: a gravelly hill, yellow loam, black loam, or clay soil, rather moist, and a swamp, very wet, with muck eighteen inches deep on an average, with a clay and sandy bottom. The swamp was covered with a thick growth of alders. The upland appeared to be almost filled, or paved, with small stones. The whole lot was a very bad looking piece of land. In the spring of 1839, the stones were picked off the upland, and it was ploughed for the first time, which threw up as many more small stones as had already been picked off. The alders were cut from the swamp, and a ditch dug through the same to drain it. I then undertook to plough the wet, or swamp land, with six oxen; but they did little more than merely to tear it up in spots, there being so many roots. It was so bad I concluded not to cultivate it.

At this time I built a shop adjoining my house, from which I could see to any part of my little farm, and give directions about the work without leaving the shop. Having but limited means, and not being able to do much on the land myself, I made but slow progress in improvements. I commenced a ditch six feet from the ploughed or upland, and ran it around the swamp on three sides, six feet wide and eighteen inches deep, and threw the muck upon the space between the ditch and upland, which gave me six feet more in width to my upland around the meadow. This looked well, and I was not content to stop here. According to the Yankee motto, thinking it best to keep moving, the following year I filled the ditch with stones at the bottom, then gravel, then loam, until it was filled even with the surface of the swamp. Then I cut another ditch around the swamp, directly beside the one that I had filled up, and threw the mud on the same, which added six feet more, or twelve feet in all, to the upland on three sides of the swamp. I again filled the ditch as before, and threw the muck from another on top. I pursued this course, until the whole swamp was reclaimed, which raised the surface eighteen inches higher than it was before. I then removed more than half of the muck to the upland, and returned as much loam from the upland in its place. Then by ploughing, the loam and muck were well mixed. I have an open drain leading through the meadow, from the spring by the hill, to a drain by the road; thus the meadow is rendered dry enough for any kind of cultivation.

This method could not be practised as a general rule, with regard to economy in regard to economy in reclaiming wet land. I had good reasons (or thought I had) for re-

claiming my own in this way. In the first place, it was but a small piece, near the house, and a convenient place for a garden. I also wished to remove the gravel and loam from the side of the hill to put in a bank wall, and make room for a row of cherry trees. I wished to make it myself, and add to the beauty of the scenery about the garden. Having but limited means, and keeping within those limits, I made but very slow progress, and was three or four years reclaiming my meadow. The stone, gravel, &c., was wheeled on a wheelbarrow from five to fifteen rods. The cost of reclaiming the meadow in this way was about three dollars to the square rod, or $480 to the acre. But I must charge the upland with half that amount; for every load used to raise the meadow was taken out of the way from the upland. It would thus leave the expense of the meadow at the rate of $240 per acre.

In the year 1841, I received a few fruit trees of choice kinds, from a nursery near Boston, which was the commencement of my setting fruit trees; and from this date I made it my practice to set a few trees each year, of the best varieties. I would here mention, that wishing to avail myself as much as possible of useful information in regard to farming, gardening, and the management of fruit trees, I became a subscriber to the Boston Cultivator, at its commencement, in 1840. Since that time I credit its editors and numerous correspondents with much valuable information. The more I studied into the art of gardening and growing fruit trees, the more lively interest I took in the same —not more for the profit than by the beauty of the scenery, to make home the more sweet. In 1843, I transplanted to a row by themselves, a few small apple trees, that had come up spontaneously about my place; and the following year I pursued the same course, at which time the row numbered about one hundred and fifty trees. In 1845, the largest of these I had grafted, and at the present time, one of these trees has fruit on it, being only six years from seed and four from graft.

In 1846, I concluded to commence a small nursery of fruit trees. Having previous to this obtained Downing's work on Fruit and Fruit Trees, and also Thomas's and Kenrick's upon the same subject, I had studied their manner of treating fruit trees, both in the nursery and as standards, and could fancy much pleasure in the same. At this time I sowed seed of various kinds, and bought a few seedlings suitable to bud the succeeding summer. My meadow being now about completed and made dry, it gave me more room to extend my nursery. In the spring of 1847, I grafted a few apple trees on the root, with good success, and the following July commenced budding for the first time. At the present time I have my land so completely covered with trees, that I am forced to convey the dressing to it in a wheelbarrow.

Although I can do but little in the nursery myself, I usually go into it every day, (upon the wheelbarrow) and see what is in the most need of being done, and lay out the work for the day. Sometimes I work there myself, by getting upon my hands and knees between two rows of trees, and trim or weed them as I creep along. Sometimes I bud a few trees myself, but it being rather inconvenient for me to do this work,—I consider it better to work in the shop, and hire the budding done. It requires nearly all the work of one man now to attend to the nursery. The number of trees on the place at the present time is as follows:

Apple,	6787
Plum,	388
Cherry,	814
Pear,	2947
Peaches, Apricots and Nectarines,	640
Quince,	377
Whole number, including all varieties and sizes,	11,953

Together with a great variety of Grape Vines, Strawberry Plants, Gooseberry and Currant Bushes. The whole quantity of land cultivated is about one acre, there being about one third of an acre used for yard, buildings, &c. I raise between the rows of trees the various kinds of vegetables needful for family use.

One row of apple trees, one hundred and twenty-five feet in length, and containing four hundred trees, budded September last, now stand five and a half feet high, of the present year's growth. But to be more sure of a good growth another year I intend to transplant some of them. My apple trees have borne but little fruit yet, which I account for by the rapid growth they are making. My stone fruit trees would yield me large crops, were it not for the curculio. I have tried many experiments to no avail, and some with more success. I have applied salt to plum trees since I first commenced growing them, using from one to two quarts to each tree, according to its size, spreading it in March or April under the branches of each tree as far as they extend. Although there is no perceptible dimunition in the ravages of the curculio on the trees thus treated, yet I use salt annually, as I perceive it to be of great benefit as a fertilizer. I practice washing my trees annually with potash, or strong soap-suds, and throwing dry ashes on the trees, when the dew is on them in the morning, and am not much troubled with insects, except

the curculio, and sometimes the borer. The borer is only destroyed with knife and wire, by watching the trees.

I will here mention a successful experiment for the protection of the plum against the curculio. Last year I made two bags of old thin muslin and drew them over two limbs about the time the fruit set. Within each of these bags I saved a few beautiful plums, and not a plum did I save on any other part of the tree. Taking courage at this good success, I bought last spring a few yards of bonnet lining which I made into bags, according to the size of the limbs I wished to cover. These I drew on the limbs of several trees, some when the plums had set, and others when they were in the blow; for I found the enemy had made their appearance while the trees were in bloom. Under each of these bags I saved plums, apricots and nectarines, upon limbs of twelve different trees; and these were the only ones I saved this year. The first of August I removed the bags, the curculio having disappeared. Some may think this would be too expensive, but I think not. The muslin would last many years; and by training the trees, or the branches in the right form, they might easily be covered, to the profit of the fruit grower. Be this as it may, I have found it of great use to me, as I had bought a variety of choice plum trees from which I did not like to use buds and grafts, until I had proved the fruit. This I have accomplished. One small branch covered by a bag, measuring six and a half by nine inches, contained twenty-one beautiful plums, hanging in one solid cluster, causing the little limb to bend so much beneath its weight, as to require a prop to support it. Upon another tree (the Moorpark Apricot,) I saved eight apricots, under a very small bag. I am training some apricots and other trees in the form of a fan, to make them the more convenient to be covered with the muslin.

I would here mention that I have this summer been using refuse tobacco with good success in driving away the insects. On throwing the dust, or snuff into the tree, we can see the rose bugs and other insects leave the tree immediately. I also use it around the roots of peach trees for the borer. Until within two or three years, the only manure used by me, has been the compost made in the summer, as follows: weeds, potato tops, pea and bean vines, or any other vegetable matter, mixed with sand and loam in alternate layers, when for low land; and with muck, when for upland. This heap would receive the scrapings of the yard, road-side, and also the washings from the house daily, together with some salt and ashes; this, with the manure from the pen of one hog, mixed with it, has been all the manure I have used until 1846. Then I bought a cow, and in 1847 a horse; of these, about half the manure has been used on other lands.

Although I have been many years doing what capital could have done in much less time, yet I have the satisfaction of building up my little place by my own industry; laboring under very unfavorable circumstances, without capital, and without the use of my legs. But I am now in a forest of fruit trees, planted by my own direction; and the soil drawn upon the roots by my own hands, as I sat upon the barrow or box. I can now view the works of the Almighty in the growth of these trees, and the production of their fruit.—*Trans. Essex Mass. A. Soc.*

Methuen. *September* 3*d*, 1849.

EXHAUSTION OF THE LAND, A NECESSARY CONSEQUENCE OF DEPENDENCE ON FOREIGN MARKETS.

Tobacco Land.—Professor Johnson, in the course of lectures delivered by him a short time since, before the New York State Agricultural Society, among many valuable facts worth the attention of agriculturists, stated that tobacco was a crop which contained much mineral matter. Suppose, says Professor Johnson, an acre to yield eight hundred pounds; these eight hundred pounds will contain about one hundred and sixty pounds of mineral matter, which is carried off by the crop, and in this way the land will soon be exhausted. In four years, six hundred pounds of mineral matter would be carried off from an acre of tobacco land. It is the duty of the farmer to supply the mineral matter thus specially exhausted, if he wishes to sustain the soil.—*Balt. American.*

Maryland and Virginia have exhausted themselves in growing tobacco for foreign markets. They have extracted from the soil all that it contained that was fitted to afford nourishment to vegetation, and they have returned to the earth no part of the refuse of its products. Ohio has followed in their wake, and the consequence is, that her produce of wheat has fallen to less than twelve bushels to the acre. The further consequence of this is shown in the following paragraph, which we take from one of the journals of the day:

The Daily Scioto, (Ohio) Gazette, of the 26th inst., says that the emigration from Ohio to States further West is very large this year. Ross county alone has lost a number of its most substantial citizens.

THE EFFECT OF PLOUGHING IN GREEN CROPS, AS COMPARED WITH FEEDING THEM.

This is a question to be regarded, in various lights, and altogether offers to the inquiring agriculturist a wide and very interesting field for investigation and experiment.

It will be seen that an eminent agricultural lecturer in England, contends explicitly, that *"the ploughing-in of any green crop and its subsequent decomposition in the soil, will give more manure to that soil, than if the crop had been fed off."*—

If the reader will pass on to the next article to this but one, kindly communicated by the much respected President of the Essex Agricultural Society, he will find, that the testimony adduced by the English lecturer, in support of his theory, from practical farmers, is strongly corroborated by the effect of a different experiment related by a worthy practical farmer, of Danvers, Massachusetts. True, he has not compared the effect of the manure produced, from an equal quantity of oats fed, either off or on the ground; but who can doubt that it was greater, in this case, than would have been the manure which the oats alone would have produced if so employed, without saying anything of the expense and trouble of so employing them, as compared with merely turning them in, and leaving them to decay, and yield their fertilizing power to the crop of onions grown upon them? It is, indeed, this immense saving of labor accomplished by turning in green crops, which would of itself recommend it to more general adoption; and here is a case in which agricultural chemistry may do its office, by deciding to what extent any given crop to be turned in, may contain the elements essential to the growth of the one which is to follow it. Mr. Bruxton would seem to have proved in this case, by the most reliable of all tests—experience—that oats make, in this shape a *meal for onions*, as wholesome as for horses in another stage of their growth. The whole experiment, in fact, and its results, constitute that new and valuable information, which agricultural exhibitions elicit, when parties explain how certain results are reached, much more valuable than the *mere exhibition of fat* and fine things; and we may here say very sincerely, that in our view, this communication possesses adventitiously, a decided additional interest from the fact of the copy of it reaching us, in a very fair and very legible hand, of a little school lady, not yet in her teens, the daughter of the President of the Essex Agricultural Society. These are the children who truly "honor" their "parents;" and for whom, when grown to womanhood, it may be fairly and justly claimed.

"Give her the fruit of her hands, and her own works praise her in the gates."

[*To the Editor of the Mark Lane Express.*]

Sir,—It is yet a common notion that herbiverous animals have some distinct and peculiar mode of action upon the various constituents of their food, by which those parts expelled as excretæ are rendered more fit for the food of plants than could be the original food, rotted or decomposed in any other way. It is also ordinarily received that the deposits of a number of animals fed upon an acre of any green crop, will be more beneficial to the land than an acre of the same crop, ploughed in and properly decomposed in the land.

In my lectures, for some years past, I have endeavored to combat these opinions, but as they are still retained in some quarters, I intend in this letter to repeat my arguments, and to give instances where *practice* has proved the truth of theoretical deductions. I shall not here argue as to the amount of profit and loss attached to either mode

of proceeding, as in fact, must always depend upon circumstances, of which the farmer is the best judge. Nor shall I attempt to prove that, under all possible circumstances, to plough in a green crop will give a greater produce than to feed it off. For in case of exceedingly light lands, the mechanical action of the treading of the feet of the sheep might more than counterbalance the loss of manure by the feeding. What I assert, however, is, that under general circumstances, in ordinary soils, *the ploughing-in of any green crop, and its subsequent decomposition in the soil, will give more manure to that soil than if the crop had been fed off;* and that the effect of this greater amount of manure will be seen in the subsequent crops. The arguments in proof may be stated as follows:—

Firstly: It is well established that animals in breathing, give back more to the air than they derive from it. They receive nitrogen and oxygen, and return them again, plus a certain excess of nitrogen, carbonic acid, and aqueous vapor. Animals also transmit to the air much in insensible and sensible perspiration.

Secondly: The experiments of Boussingault and others have shown that the liquid and solid excrements of animals weigh less than the food from which they have been derived, and that as regards the food excretæ are deficient in *nitrogen*, carbon, and hydrogen.

Thirdly: It is well known that animals consume a considerable portion of the farinaceous and oleaginous portions of their food for the production of *animal heat*, and that the greater portion of the excess is laid up in the form of fat; that of the nitrogenous portion, part is consumed by the voluntary and involuntary motions of the muscles, and part forms fresh flesh for the growing animal. Of the inorganic matters of the food, a portion is required for the formation of bone. It is, therefore, quite clear, that there must be much less manuring matter in the excrements than in the food, of which they are merely the unconsumed remains—*the ashes.*

Fourthly: It is known that animal and vegetable substances are composed of the same original elements; that all animal particles have first had vegetable life; that though the proximate changes and combinations of their aliments are most innumerable, yet, that the results of the ultimate decomposition of animal and vegetable matters in contact with air are the same.

Fifthly: To sum up: If, as it has been proved, the excretæ of animals weigh less than the food they have eaten; if there is a diminution of the most valuable of the ingredients in passing through the animal; and if, in their ultimate decomposition, the food and the excretæ give the same products, it follows that the products of the decomposition of the original food will be greatest in quantity and richest in quality; but practical experiments are, in this instance, so easily made, that I should be wrong if I omitted to mention some of the numerous facts which experimentally prove the truth of my assertions. Mr. W. Trumper of Dorney, near Windsor, Mr. Oakley of Rochester, and others, have forwarded me the results of trials made on their respective farms. Mr. Trumper, in a field of rape part fed off by sheep, and the other ploughed-in, found in the succeeding wheat crop a difference of a quarter per acre in favor of ploughing-in. I insert letters from some other gentlemen who have also found favorable results.

—

LETTER I.

MY DEAR SIR,—In reply to your letter, I am instructed to say, that the members of the Farmers' Moon Club, in the neighborhood of Rochester, Kent, unanimously agree that vegetable manures are peculiarly fructifying, and that, taking the case of a fallow or other field, being all previously of the same tilth, and sown with rape for feeding, and divided into three divisions, one of which shall be fed off with sheep without any extra food to the rape, the second division ploughed in, and the third division fed off with oil-cake or corn; that the worst corn succeeding the rape will be on the first division, the next best on the second, and the best on the third. Thus all speak in favor of green crop for manure.

Your letter came to me without a signature, but not to be misunderstood.

Yours truly,

JOHN OAKLEY, Old Broad-street.

August 10, 1849.

J. C Nesbit, Esq.

Members of the Club:—

Jno. Stunt, Gillingham	Jno. Walter, Upchurch
Ambrose Spong, Frindsbury	W. Walter, Rainham
Jno. Baker, Cooling	Cs. Smart, Gravesend
J. H. Solomon, Sherne	R. Cobb, Higham
W. Eley, Frindsbury	Jno. Oakley, Darland
W. Lake, Chalk	

One member deficient by a late death.

LETTER II.

Naseby, May 15, 1849.

MY DEAR SIR,—I regret I was not at home to answer your inquiry sooner, having been in Yorkshire the last fortnight; however, I hasten to send you the required information. In the spring of 1846, I had more turnips than my stock could consume; I therefore thought it was reasonable that, if the crop was broken to pieces and ploughed-in, the grain crop that followed would derive as much benefit as if eaten by sheep. I therefore did so with one acre on the first week in February, and with another upon the fourth week in March. Part of the rest of the field was eaten on the land, and part being newly ploughed upland, the whole crop was drawn off.

On the land where the turnips (white rounds) were broken and ploughed in, on the last week in February, the produce was 84 bushels per acre of Hopetown oats.

Where the turnips were broken and ploughed-in, on the fourth week in March, the produce was 74½ bushels per acre.

Where eaten on the land by sheep, 70¼ bushels per acre;

And on the newly-ploughed upland, the whole of the crop drawn off, 41 bushels of wheat.

I hope that this will be satisfactory; if not, I will make it so.

I am, yours faithfully,

J. C. Nesbit, Esq. PETER LOVE.

—

LETTER III.

Assington Moors, June 15, 1849.

DEAR SIR,—I have just seen Mr. Underwood, who was a neighbor of mine eighteen years ago, but is removed to a distance. He says he has practised ploughing-in a few acres of turnips almost every year, for upwards of twenty years, and considers three sacks of barley per acre quite within bounds, as the increase from ploughing-in over feeding-off. The clover is much better; but he has not observed the wheat sufficiently to say what the difference is. He estimates an average acre of white turnips to be worth 30s. more to chop and plough-in any time before they begin to run to seed (say February out) than to feed off.

I inspected a field of wheat this week belonging to John Gurdon, Esq., which was white turnips three years back; a part were ploughed-in, and the rest fed off with sheep, and half-a-pound of oilcake per day each given to them. The wheat, where the turnips were ploughed-in, is decidedly better than the rest; I think three bushels per acre. Mr. Hudson, the steward, told me the barley was quite a foot higher than the rest of the field, and three sacks per acre, if not more, better. The clover was all fed off, and no notice taken; nor would anything more have been thought about it had not the wheat looked so much better than the rest all spring. The turnips were about three quarters of a plant but regular; the sheep went down with the epidemic, and were sold, leaving about two acres of turnips to feed; and rather than purchase any more stock they were ploughed in.

As I told you at the club, I am generally a buyer of turnips; but the obstinacy of my neighbor, Mr. Underwood, who refused to take 20s. per acre for his, to feed off (for the sake of convenience to me) when almost every body else were giving theirs away, attracted my attention to the after crop; and I can, in two instances, confirm his statements. Notwithstanding if 1½ cwt. of swedes (I think a ton of Swede turnips will make 14 lbs. of mutton, from experiments I have tried) and 2 cwt. of white turnips will make 1 lb. of mutton, and we can grow 21 tons of the former and 26 or 28 of the latter, it must be more profitable to feed at 5d. per lb. for the mutton, than to plough-in at 30s. or 40s. per acre in the corn crop.

I have been unwell, and could not see the parties, or I should have answered your note before.

I am, dear Sir, very sincerely yours,

Mr. J. C Nesbit. THOS. HAWKINS.

If these results are found incapable of convincing to your sceptical friends, they must have ensconced themselves behind a barrier of ignorance and prejudice impenetrable to the shafts of reason.

It may be necessary to say, that in ploughing-in a green crop for manure, great care is necessary in choosing a suitable time, and that it be not allowed, by two long growth to become fibrous, so as to delay its decomposition in the soil. For turnips, February, or early in March, is quite early enough, and the best effect is seen where they have been touched by the frost.

It is scarcely needful to say, that the arguments advanced do not apply to sheep fed on turnips with oilcake, unless an amount of oilcake equivalent to that consumed by the sheep in one instance were ploughed-in with the turnips in the other.

In conclusion, I reiterate that my object has been, not to prove that *ploughing-in* is profitable, in comparison with *feeding-off*, but rather to elicit a principle which, if once known and understood, may, on many occasions, as when stock is dear, and green crops abundant, be brought into beneficial and profitable practice.

I remain, Sir, yours very truly,

J. C. NESBIT.

Scientific and Agricultural School, Kennington.
Sept. 14th, 1850.

CLOSING OF COTTON MILLS AND CONSEQUENT FLIGHT OF THEIR INMATES TO THE WEST.

THE TIDE OF IMMIGRATION.—This "tide" continues to pour into our city and state. Yesterday and day before, some four or five hundred emigrants, mostly from the Eastern States, landed at our port, and our streets yesterday were crowded with teams carrying these new comers and their "traps" into the interior.—*Milwaukie Sentinel.*

These people are mostly, as we are here informed, "from the Eastern States." If our readers desire to know why it is that the people thus fly from those states where they would be customers to the farmer, we pray them to read the following statement, and satisfy themselves of the true cause why it is that so many persons are seeking to become producers of food, and thereby to increase that large surplus for which our un-*common-sense* friends in the *Union* assure us we need a market.

The Providence Journal publishes a list of the seventy-one cotton and woollen mills, all, with the exception of three, within thirty miles of Providence, R. I., that have, in consequence of the high price of the raw material, wholly or partially suspended operations. Many of these were manufacturing printing cloths. The New Bedford and Oxford mills, within thirty miles of the city, are still in operation. The Manville mills are running half time, and the mills at Pawtucket are running short time. The mills at Natick are running out, and will stop in a few weeks; and many other mills are preparing to stop.

Here are no less than seventy-one markets for food and clothing closed, within thirty miles of Providence. Add to these the other cotton and woollen mills closed, and the furnaces that are closed, and the bloomeries that are closed, and the rolling mills that are closed, and the mines that are closed, and it will be found that there are probably little less than one thousand of these markets for food and clothing that have been closed by the existing tariff, which professes to give protection by aid of what are called revenue duties. It is surely time for the farmers to awake to the fact that the people who are thus deprived of the power to obtain food in exchange for the labor employed in making cloth and iron, must seek to raise food for themselves, and that the effect must soon exhibit itself in an over-supply of food, and an under-supply of cloth and iron, with enormous injury to themselves.

We beg the planters to reflect what would be the quantity of cotton consumed in these seventy-one mills, and to seek in the accounts of the mills of England, now running short time, or in the importation of cotton goods, for any compensation for the enormous sacrifice of their interests that is now going on. In five years from the date of the passage of the tariff of 1842, the home consumption of their great staple grew from 263,000 to 600,000 bales, and it would now reach 900,000, had the tariff remained unaltered, whereas the total consumption of the country at the present time is *far less* than it was three years since, notwithstanding an increase of population of more than ten per cent., or probably two millions and a half of souls. Assuredly the world has never seen a case of much greater insanity than is now manifested by our planters in their determination not to make a market in the land for the products of the land.

NEW AND EASY MODE OF INCREASING A CROP OF ONIONS.

DANVERS, *October* 22, 1850.

TO THE EDITOR OF THE "PLOUGH, LOOM AND ANVIL:"

DEAR SIR:—Shortly after our Agricultural Exhibition, I forwarded a hasty reply to your inquiries as to the cultivation of *the onion* in this vicinity. As Chairman of the Committee on Root Culture, I have lately received from Daniel Buxton, a worthy farmer of this town, as well skilled in this cultivation as any man I know, a statement showing the result of his labors on about half an acre of land, this year. It is an unvarnished history of actual labor by the individual who performed it, entitled to entire confidence. It shows a net income from the land of at least $150 per acre. It suggests many facts connected with the cultivation worthy of notice. I enclose a copy (*prepared by my little daughter at school*) to be used as you may think proper. When our lands, by the proper application of skill and labor, can be made to yield in this manner, there can be no occasion to wander abroad for employment.

Respectfully and truly yours,

J. W. PROCTOR,

HON. J. S. SKINNER, Phila.

TO THE COMMITTEE ON ROOT CROPS.

GENTLEMEN:—In compliance with your request, I will endeavor to state the peculiarities in the cultivation of the field of onions examined by you, as near as I am able. The cultivation was not commenced with any thought of offering it for premium. I was induced to do this by the fact of having pursued a new mode of culture, and by the promising appearance of the field. The land is part of a lot of about thirteen acres that I have owned for a dozen years, situated on a plain near the Collins' House, in Danvers. Previous to my owning it, the soil was light, free of stones, of ordinary quality, yielding moderate crops only—say about thirty bushels of corn, or one ton of hay to the acre. Since I have owned it, it has been ploughed, deepening gradually, from *six* to *nine inches*, and manured freely; and kept as free of weeds and all waste material, as in my power. The parcel on which these onions grew, has yielded onions each year, for the last ten years. There has annually been applied to it a dressing of manure, averaging about five cords to the acre—*barn manure, compost, ashes, muscle-bed*—varying from time to time, as found convenient. I speak of the average application because I have no means of making the statement more particular. The last year (1849) I found the crop was not doing as well as usual; the plants began to wither early, and the produce was only about two bushels to the square rod. I thought the land needed some other nutriment. As soon as the crop was gathered, I ploughed the land and sowed it with oats. These came up well and grew large; and late in the autumn, just as the ground was about to freeze up, I turned these under. In doing this, I run the furrow deep, using *a side hill plough*, so as completely to cover the herbage, and there it remained until spring. On examining it in the spring, I found the oats as sound as when they were turned in, consequently I could not use a plough on the land without bringing them to the surface, I therefore went over the ground several times with a cultivator, taking care not to disturb the oats beneath. I then applied a moderate dressing of pure manure, taken from my hog-yard—a sort of compost of meadow-mud, stable manure, &c., refined by the operations and droppings of the swine, not exceeding three cords to the lot; and having pulverized the surface as perfectly as in my power, I distributed the seed, by the use of a machine, in our usual way, in ROWS FOURTEEN INCHES apart. It came up even and abundant, and grew finely. For the first six weeks I saw nothing peculiar in the growth, after this there was a greenness and healthy vigor about the plants, that indicated the operations beneath. This vigorous appearance still continued until the plants fully matured. In the same field, within a few rods, was another parcel of onions, cultivated and manured in the usual way—the contrast between the two parcels was quite striking—the one I describe yielding at least one third more than the other, and of a quality decidedly superior. This parcel was found to measure one hundred and five square rods, and the quantity produced four hundred and forty-eight bushels; or a yield of three and a third bushels to the square rod.

The produce was remarkable for uniformity in size, varying from *one to three inches* in diameter, and of the thick plump form, that I have been endeavoring for years to grow. I raise my own seed, and select for this purpose, plants of the form and description that I wish to produce. By continuing this process for years, I have found that the form can be very materially changed. I have seen, the present season, onions of larger size, and more abundant; but have not seen any, the crop as a whole, that I should prefer. I am the more particular in this description, as I think the experiment with the oats to have been quite beneficial. I have repeated it again the present autumn. The crop of onions generally in this neighborhood, the present season, has averaged, I should think, about four hundred bushels to the acre.

I am now delivering onions at the depot in Danvers, at the price of *seven shillings* per barrel—or about *forty cents* a bushel for the onions, [$160 an acre.] There is no crop, to my knowledge, that yields a better reward for our labor. If this plain statement of facts shall be thought worthy of your notice, I shall be gratified in having thus contributed *my mite* for the information of my brother laborers in tilling the soil.

DANIEL BUXTON.

DANVERS, *October* 21, 1850.

A few words from Mr. Proctor on the different *kinds* of onions most in use in New England, the kinds most esteemed, most productive, &c., would have been satisfactory.

The following are the constituents of Onions, according to Fourcroy and Vanquelin:

Acrid Volatile Oil,	Woody Fibre,
Uncrystallizable Sugar,	Acetic and Phosphoric Acids,
Gum,	Phosphate and Carbonate of Lime,
Vegetable Albumen,	Water.

"If," says Doctor Pereira, in his treatise on Food and Diet, "the volatile oil of onions be dissipated by boiling, these bulbs no longer possess any acid or stimulating qualities. They then form mild and digestible aliments: whereas, in the raw state, that is with the oil, they are pungent, acrid, difficultly digestible stimulating substances."

Mr. Strachan, in the Horticultural Transactions, has described eighteen distinct varieties. By far the most generally cultivated in England is the Strasburgh, *Dutch* or *Flanders* onion. So called when the seed is procured from thence, or *Essex onion*, when the seed is saved in that country. Its shape is oval, large, and light red, tinged with green, hardy, keeps well, but of strong flavor.

The largest onion grown is the *Tripoli;* oval, light red, tinged with green and brown, soft and mild, but does not keep long after it is taken up.

There is an onion, called the under-ground or potatoe onion, which multiplies itself by formation of young bulbs, on the parent root, and produces an ample crop below the surface; ripens early, but does not keep beyond February; flavor strong.

The *Welsh onion*, or Ciboule, *A'llium fistulosum*, is a native of Siberia; hardy, strong in flavor, but does not bulb; sown in autumn for drawing in spring.

For early use, in England, the Portugal and Spanish onion yield the greatest crops. For principal or main crops, the Strasburgh, Deptford and Globe are generally preferred; the silver-skinned and two bladed are considered the best for pickling. The Potato onion is occasionally planted as an auxiliary crop, and the Welsh onion for drawing early in the spring.

Why is it that the onion should be cultivated so much more extensively, and regarded so much more as a staple crop in New England than in the Middle and Southern States?

LIQUID MANURE—QUANTITY TO BE SAVED FROM A GIVEN NUMBER OF ANIMALS.

Our country is yet comparatively so new, and labor applied to agriculture so high, compared with its price in all other countries, that we have not yet entered on the *refinements* of agricultural practice. How few farmers there are, who bestow a thought on the amount sustained annually by the *loss of the liquid manure of their estates.*

To the solid mass they pay more attention, because being visible and *tangible,* they consider it of more value; but the calculating farmer will take care, that even though he has no contrivances for collecting and applying it, in its liquid form, arrangements are made for its absorption and preservation, as far as possible, by means of litter, turf, leaves, &c., provided for that purpose. As far as this method of saving it goes, the farmers of New England are beginning to make the necessary provisions, in cellars over which their domestic animals are stabled. To that extent we observed the requisite arrangements at Mr. Webster's farm at Marshfield; at Mr. Newhall's, near Boston; and in Mr. S. Lawrence's well-arranged stables, at Lowell, and others.

But in Old England, where tenants can scarcely make their rents and pay poor-rates and taxes, with labor at $2 a week, (the hireling or the hind, as he is quite commonly called, finding himself;) and where the average produce is said to be from 25 to 28 bushels per acre; there, necessity has driven every cultivator to practice what may be called as we have said, the refinements of agriculture. There they are getting in the way of building *tanks,* to save every drop of liquid manure.

So important is the subject considered, that the Scotch agricultural societies lately offered a premium of ten sovereigns for a "*Report on the best mode of saving and applying the liquid manure of farm steadings.*"

The prize Report was written by a person who "has had, as agricultural engineer, every opportunity of observing the various methods practised by many leading farmers, in some of the best agricultural counties in Scotland and England." Appended to his report is a plan of a farm steading, with a tank for liquid manure, (as well as suitable places for the dung yards,) "into the end of one of which all the drains conveying the urine from the various houses run." Here in many parts of our country, on the contrary, the cow yard and its contents are generally left exposed to all weathers; being sometimes constructed on a warm *hill side, the better and expressly to keep it dry* by letting every thing wash away as speedily as possible. To leave the American farmer then, no excuse for being ignorant of what he does lose of liquid manure, from a given number of animals, (that is, *if he will read it,*) we submit the following, "calculated produce of urine from a certain number of animals kept in the house and fed on green food;" taken from the prize report above mentioned:

			Gallons.
Cows and bulls,	21		
Fattening bullocks,	18		
	39 at 3	gallons each,	117
Queys,	10 at 2½	"	25
One year old cattle,	20 at 1½	"	30
Horses, old and young,	16 at ½	"	8
Swine,	15 at ⅓	"	5
			185

Which, for the whole year would be - - - - -		67,525
But, as the horses will be employed in the fields at an average of 8 hours daily, one-third of the urine they make must of course be deducted, which is - - - - - - - -	Gals. 973	
And the cows and young stock, exclusive of the bullocks, may also be more or less in the fields, at an average of say 4 hours daily, one-sixth of what the produce must also be deducted, which is - - - - - -	7,178	
		8,151

This shows a produce, available for the whole year, of 59,374 gallons from the stock kept on such a farm as the reporter has assumed. But as it is proved that, in its original state, it is much too caustic and strong to be applied to grass lands with advantage and economy, it should be well diluted with water, and applied frequently in a weaker state; these 59,374 gallons should, therefore, at least be doubled, by adding water, making—

	Gallons. 118,748
And to which must be added slops from the dwelling house, being dish-washings, soap-suds, and contents from the water-closet, &c., at the low estimate of 10 gallons daily for 365 days. - - -	3,650
Here then is, in whole - - - - - - - - - - -	122,398

gallons, which will irrigate 30 acres three several times, allowing 1,200 gallons per acre each time, and that after allowing waste by absorption, evaporation, or otherwise, and a considerable quantity for throwing daily over the dung, as pointed out. If, however, the cows and young stock should be kept a longer time in the house than the reporter has stated, then, of course, a greater quantity of urine will be made for the purpose of irrigation, and for saturating the dung.

EFFECTS OF SEPARATING THE CONSUMER FROM THE PRODUCER.

Physical Effects.—A letter from Kilkenny, Ireland, says, that "A large number of the population have already gone to America; they are going every day, and more will assuredly follow. The state of the agricultural population is scarcely a degree above pauperism. The general rate of wages is 6d. a day, without food, and women employed in binding during the harvest have received only 3d. a-day."

Moral Effects.—The criminal tables for Ireland, for the year 1849, show an increase of committals of 3467, or 89.9 per cent. on the preceding year. The gross annual number of committals for a period of seven years, in 1849 has ranged from 16,966 (1845) to 41,989 (1849). In 1843, the total number of committals was 20,120; for the next three years it was below 20,000; in 1847, it rose to 31,208, and in 1848, to 38,522. A comparison of the year 1849 with its predecessor shows in crimes against the person with violence, a decrease of 11.8 per cent.; in those against property with violence, an increase of 4.7; in those against property without violence an increase of 15.5; in malicious offences against property, a decrease of 23.73; in forgeries and offences against the currency an increase of 30.05; and in miscellaneous offences an increase of 6.01 per cent.

Industrial Effects.—Portugal, it is said, will send no contributions to the Great Exhibition of 1851.

For more than a century Portugal has had almost free trade with England, of which she has been a mere colony, and the consequence there, as every where, have been poverty, depopulation, and barbarism! Such s the tendency now in Canada. "Huzza for Free trade!"

THE BALDWIN THEORY AGAIN—MORE FACTS—MORE DEMONSTRATION.

BALTIMORE, *October* 24, 1850.

DEAR SIR:—You would gratify many of my readers by the submission of any *facts* which may have come to your knowledge in corroboration of your theory, that *shade* is the great resource to be relied on for the improvement of land. There are many circumstances that encourage a belief in its soundness, which have fallen under my own notice, but farmers are a matter-of-fact class of people. Perhaps it is well that they should be, though I well know that they are sometimes a little slow in their belief of facts; as for instance, there is nothing needed (except personal experience) to convince them of the value of *guano*, which I did not communicate more than twenty years ago, along with barrels of the substance, but although they now cannot get it fast enough at $50 a ton, then they were either very incredulous or very slow to heed. As the conductor of an Agricultural Journal, it is always agreeable, when we can, to support theory by facts. It may be in your power to state some, specific and to the point.

Very respectfully,

J. S. SKINNER.

WINCHESTER, *November*.

DEAR SIR:—Those of your readers who require facts in support of the theory of shade, are probably not aware that those propositions which I submitted for your consideration in October last,* and which you were pleased to denominate the Baldwin Theory, were inductions from numerous facts which had passed under my personal observation, during an attempt to renovate a large tract of exhausted land in this county, and which had all been published in previous numbers of the "Plough, Loom and Anvil." Those facts, I understand, have been subjected to the test of experiment, and I believe, are universally admitted to be true by observant practical farmers. It is no longer a mooted question in the valley of Virginia, that *all soils alike may be make exceedingly fertile by shade alone*. This is the important fact, which will enable every farmer to fertilize every acre which he may be able to cultivate; and this, *the fact* which in my opinion must prove fatal to the existing theories in agriculture. For no one will contend that *humus* is the residue of vegetable decomposition, if he understand that it can readily be formed by substances incapable of decomposition. Nor can he believe that those plants known to impart fertility to the earth during their growth, obtain it by their tap root from the mineral constituents of the sub-soil, or take it through their leaves, in carbonic acid and ammonia from the atmosphere, if he know that an equal fertility may always be produced by a covering of plank or straw.

I will quote, from the "Domestic Encyclopedia," published in 1803, a very striking fact, illustrative of the fertilizing power of shade, although the author only intended it to prove the indifferent quality of manure made by feeding cattle in the fields. "A fodder-house (a hollow rick made of maize-tops in the way of thatch) was set up in a field, as is usual; it was fenced in. At the south front maize was husked, and the husks were sheltered in the fodder-house. In the course of the winter they were given out to cattle, in front of the rick. In April, the fodder-house being then empty, was pulled down, and the covering of maize-tops were given to the cattle. The ground thus *sheltered* by the fodder-house for six months, October to April, showed marks of richness greatly superior to the ground on which the cattle were foddering during the same time: grass, weeds, and crops, during the four or five following years of my remaining on the farm, showed this in their growth. Where the fodder-house, three hundred feet long and twenty broad, stood, and sheltered the ground, the richness of the soil was strongly marked; when but a faint superiority over the common field appeared on the part where the cattle were foddered."

I will quote also, a paragraph from Von Thäers' Principles of Agriculture, page 211. "I have often seen the washed, but not rotten straw, thus left on the ground, removed to form fresh litter, and nevertheless, the soil from which this straw has been collected,

* See page 261 of this vol.—Edit. P. L. & A.

appeared as perfectly manured as if all the straw had been decomposed. Meadows are often manured in this manner. I have so often seen the good effect of long or short dung thus spread over beans and peas, and left there during their growth, upon hot, light land, that I have no doubt of its advantage on these two crops. But what is still more remarkable and difficult to explain, is, that the following crops on land treated in this manner, are also superior to those on which a larger quantity of decomposed manure has been ploughed-in."

The practical advantages which will result from the introduction of the principle of shade in the science of agriculture, are too manifest to require comment. When it becomes properly appreciated and practised by agriculturists in the Southern States, I venture the prediction, that the opinion now so prevalent, that the impoverished condition of the soil is one of the evils necessarily consequent upon slave labor will be utterly repudiated. For we can readily believe, that with the ability to cultivate well, nothing more can be requisite than the ability to fertalize.

Very respectfully yours, &c.

ROB. T. BALDWIN.

We presume there is scarcely a person who has not remarked the effect of building "fodder-houses," and stacking hay and straw on poor land, while not one in a thousand has stopped to reflect upon it, and to "calculate" to what practical uses the hint might be turned. It is the fate of almost all new and important suggestions, to be received at first with inattention or incredulity. Most agriculturists would go out of their way to admire a fat beef-eaten, prancing stallion, rather than take the trouble to investigate, reflect, or experiment upon a new principle when suggested; and the great reason is, *want of appropriate education!* The tree is left too long to grow and take its set, before any attempt is made to give it the proper direction. We must improve our systems of education, and to obtain the means and facilities for that, we must diversify employment and *thus* thicken population!—*Ed. P. L. & A.*

SALTPETRE FOR WHEAT.—The May number of the London Farmer's Chronicle gives an account of an experiment made near Glasgow, on the application of eighty-four pounds of saltpetre—*sulphate of potass*—to an acre of wheat. One half was sown the 17th of April, the other the 5th of May. The unmanured wheat weighed 2552 pounds; straw 3148. Manured wheat weighed 3068 pounds, straw 4500 pounds. Difference in weight of wheat, [more than eight bushels] straw 1323.

The above figures demonstrate the interesting fact that each pound of the salt named gave per grain, six pounds of wheat and sixteen of straw, making twenty-two in all.

Mr. Kimberly, an English farmer, says one hundred pounds of saltpetre, sowed on an acre of sandy land, is equal, in its fertalizing effect, to twenty-five *cubic* yards of horse dung. One of its excellences consists in its enriching power continuing longer than any other manure—even for several years. It is stated to have paid well in some instances in the United States. It is sowed like plaster of Paris, in moist weather, in its crude state, in which it is used: the price is three or four dollars per hundred.

This is an experiment so easily to be made, upon wheat already sown, that we are sure we shall be supplied with the exact result of some yet to be made, by our friends Jones of Delaware, Mr. Colt of Paterson, N. J., and others, who need not be reminded that in all cases of experiments, many small particulars are material, which are apt not to be heeded; but the great point to be arrived at after all, is whether the play is worth the candle. *Will it pay?* is the true problem.

This recommendation of saltpetre is worthy of note, on the ground that guano was recommended by us twenty-five years ago, and is now so popular, to wit: on the ground of economy in *transportation* and *application* of it. After all, the great desideratum for American farmers is not so much how to increase the quantity of products, as it is how *to bring nearest to your land* the greatest number of prosperous consumers, who are able to consume much, and who must always consume to the amount of their products, let them labor at what they may. Every man does that, who *uses* his income in *any way*. Hence, American customers, employed in other industries, are worth more to the American farmer and planter, plus their wages or income over the wages of labor employed in other countries in rivalry with us. Will farmers ever understand this, and force their law makers to act accordingly?

MEAT BISCUIT.

A NEW DIET FOR THE ARMY AND THE NAVY, PORTABLE AND ANTI-SCORBUTIC.

THE following, from one of the very best dragoon officers in the service of the United States, relates to one of the most important dietetic discoveries that has lately fallen under our notice. The reader will require no comment from us to point out its value, nor the numberless cases in which this condensation of the great elements of subsistence—meat and flour—rendering thereby the means of subsistence at once portable and preservable—may be of immense advantage to whalers and other navigators on long voyages. Who can say how important to be able to lay up, in so small a space, an ample supply of anti-scorbutic provisions? We lately saw it stated, we think it was to the very learned Superintendent of the Coast Survey, that a government vessel, employed in making a highly interesting survey on our own coast, in the usually short season of favorable weather in those latitudes, was compelled to abandon the ground in the finest weather because she could not store provisions enough to maintain her position. With this palatable and substantial *meat biscuit* there would have been no such difficulty.

But our purpose now is merely to register this unequivocal evidence of the great national importance of a simple discovery; and we do it with none the less of pleasure for believing, as we have reason to do, that the discovery grew out of a publication of our own, first in the old "Turf Register," (and more recently repeated in the "Plough, the Loom and the Anvil") of an extract, selected by permission, from the celebrated manuscript journal of Col. Bird, on his survey, long before the Revolution, of the line between Virginia and North Carolina. A manuscript which served for many years to amuse those who had the happiness to visit, on friendly terms, the charming residence of the late George Harrison, of Brandon, on the James River—a gentleman and his gifted lady, distinguished even among their peers, for the hospitality and fine qualities that have made the very name *Virginia* gentleman, or *Virginia* lady, itself a distinction.

The extract, if we remember rightly, was a curious description of the sort of provision made by the Indians, when long journeys were to be made with the greatest expedition.

FORT LEAVENWORTH, Mo., *May* 14, 1850.

MAJOR:—I have tried the "meat biscuit" and find it all, and more, than the inventor thinks it is.

To satisfy myself, I have lived upon it *entirely*, for several consecutive days, and felt no want of any other food, and I am convinced I could live upon it for months, and retain my health and strength. I thought that although it might sustain life, there would be a craving for more solid food, but it was not so; my appetite was perfectly satisfied. The inventor thinks that five ounces a day will support a man, at a cost of about ——— an ounce. I could not use four ounces a day, made into soup, and nothing added but pepper and salt; and moreover, I found that I could dispense entirely with tea and coffee, which is a great advantage which has not been enumerated. In my judgment, this is a very great discovery, and must lead to important results.

I have long thought that the compression of wholesome food into smaller compass was one of the most important things that remained to be discovered in this age of inventions. Think of a regiment of five hundred men cutting loose from all magazines for two months, with no other luggage train than fifty or sixty mules. At five ounces a day for each man, the weight would be 9375 lbs. which forty-five mules would carry. In military operations, fresh meat would generally be found, and put into the soup, which would make it more substantial, but the men could subsist without it, and it would not be necessary for their health and vigor, to transport *bread* or any other rations.

I have no idea that it will be used to this extent for some time to come, as great

changes must be gradually made, but I am decidedly of opinion that we ought to commence introducing it into the Army at once, and I believe, *for all active operations in the field*, the advantage of this food will be so apparent that it will come into general use in a few years.

I think it will be better to have it always pulverized, and kept in tin canisters to hold about twenty-five pounds.

The inventor had better send me a dozen of these canisters before I march upon the plains this summer. I shall frequently send out detachments on long excursions, and it will be a good opportunity to put this discovery to a thorough test.

Please send this letter to Gen. Gibson, and will you inform Mr. Borden of its purport?

Very respectfully, your obt. servt.,

(Signed,) E. V. SUMNER,
Brevet Colonel 1st Dragoons.

MAJOR A. B. EATON, *Commissary of Subsistence.*

IT gives us pleasure to state, as we are duly informed, that the General-in-chief of the army of the United States, having great confidence in the judgment of Colonel Sumner, has desired the veteran, General Brooks, commanding at San Antonio, to take measures to have the "meat biscuit" thoroughly tried, and to report his opinion of its value as an article of food, in the cases indicated by Colonel Sumner's trials and suggestions.

This is no more than we should expect from an enlightened officer, like WINFIELD SCOTT; whose merits as an officer of skill unequalled in ours, and unsurpassed in the military annals of any country, are yet in *our eyes* his lesser recommendation, when compared with his varied information, the elevation of his moral character, and a *constitutional* patriotism, bounded only by the boundaries of his country—yes, should his country ever call him to yet higher responsibilities, we hope that the truth will be, and that posterity may know, it was less for his military achievements, than for his civil virtues.

For ourselves, we have no motive to flatter, having nothing to lose, and as little to hope for. Our prayer is, for the downfall of that overweening and unjust influence, which enables England to hold the world in colonial vassalage, and for that purpose compels us and "the rest of mankind," to maintain millions of men, whose only service is to *carry swords and muskets!*

As for Scott, our feeling in what we have said is, how worthless is such a tribute, compared with the services and the virtues of such a man. Nevertheless we use with alacrity, the privilege of paying it, humble as it is.

THE "DUKE'S" ROOM AT WALMER CASTLE.—This *sanctum* is a room of but moderate size, without ornament, and very plainly and scantily furnished, but neat, accurate, and orderly in arrangement; altogether bearing very much the appearance of the single room of a military secretary in garrison. On the right is an ordinary iron camp bedstead, with a single horse-hair mattress upon it; and thereon, whatever be the season, without curtains or any paraphernalia about it, the "Iron Duke" rests when at Walmer. Over the bedstead is a small collection of books, which is seen on a rapid glance to have been selected for use; the best English writers of Anne's "Augustan age," both in poetry and prose; a few recent histories and biographies; some French memoirs; with military reports, official publications, and parliamentary papers, form the little library. In the centre of the room is a mahogany table, well ink-stained, at which, for two or three hours in the day, the master of this room takes his place and plies his pen. Near it is a more portable one, so contrived as to be used for reading or writing while in bed. These, with two or three chairs, comprise the contents of the room, and are sufficiently characteristic of its owner. The window looks out upon the sea, and a door opens upon the ramparts—upon which, a few years ago, the duke never failed to be every morning by six o'clock, and there for an hour or more, take his morning walk. The view from the ramparts, by the way, is a most magnificent one; from the position of the castle, the prospect is unbroken both south and north, while directly in front it is only bounded by the French coast.—*Pictorial Half Hours.*

PROFITS OF FRUIT CULTURE IN NEW-ENGLAND—WHY NOT ENJOYED IN THE FREE TRADE STATES.

Our venerable friend, Mr. Taliaferro, of Virginia, who has held personal intercourse with every President of the *United* States, from Washington to Fillmore, and who has enjoyed the regard and confidence of some of the best of them, lately answered very promptly to a call upon him to supply, for the "Plough the Loom and the Anvil," an account of his method of *making cider*, than which the first Comptroller (who keeps his eyes open and who is a judge of other good things besides cider and oxen,) says *better never was tipped.*

In that communication which "went the rounds of the papers," Mr. T. dwelt emphatically, too much so as we thought, on the substitution of *whiskey* for "Apple jack" and Peach brandy, as being the principal cause of the general decline in the cultivation of fruits and vegetable and flower gardens in Virginia and other Southern Atlantic States.

"The time was," says Mr. Taliaferro, "when *all Virginia east of the mountains, abounded in orchards;* where once was to be seen, [on a single farm] more than a hundred acres covered with fine productive peach trees; *the same ground* is now covered with pine, and other trees of second growth. The cause of the annihilation of our orchards, was the *introduction of whiskey* as a substitute for peach and apple brandy; as to the culture of culinary and flower gardens, as a general matter, we are far behind those operations, in my early times. A goodly number of exotic shrubs and flowers have been added to the old stock. But the arrangement, and especially the cultivation of our culinary and flower gardens is very much inferior to what they once were."

Now we would ask the reader whether, in all countries these are not arts and luxuries that mark and keep pace with the march of civilization and moral culture? and if so, what is the inference to be drawn from the personal and explicit testimony of an octogenarian, whose family, associations and opportunities of observation have been of the best kind, from the days of Washington's Presidency to the present? Going back to the time when gentlemen were in affluent circumstances soon after the revolution, and could afford to indulge in the expense and the luxuries of good gardens and choice fruit, on their own account and for their own sake, without then waiting for remuneration to the sale of the surplus, for which there is now no demand within striking distance.

May not this decline, to which he so conclusively testifies, be attributed to that restless and improvident state of mind, which will always exist where a general decay is going on in men's affairs and prospects, for want of steady and diversified employment for labor and capital? The certainty, or at least the strong hope of adequate reward is essential to forwarding industry and the progress of improvement; and how can that certainty or hope exist, where all, or a very large portion, are engaged in *one pursuit?* Behold how different, as appears by the following extract, is the condition of the fruit grower in Massachusetts, where, by the votes of Southern men, the people were turned from Agriculture to Manufactures. Since that period, her population, from being half that of Virginia, has gone up to a million, after sending forth emigrants to every state in the Union, until now that she excels the old Dominion as much in population, as nature has made her inferior to her, in geographical extent, and yet more in climate and natural resources. Thus, reader, after all you see, "it *is* population that makes the food come out of the ground,"

and the pear to grow upon the tree, and the currant on the bush. Nothing but prejudice or wilful obstinacy can deny the fact. But read what follows:

PROFITS OF FRUIT CULTURE.

The following facts, exhibiting the large profits which may be derived from the skilful culture of fruits, are furnished by S. W. Cole, of Boston, who is a remarkable fact-gatherer, and who remarks, "we give some extreme cases, and others which common skill may compass. The cultivator will do well with medial success."

"Mr. Moses Jones, of Brooklyn, in this vicinity, a most skilful cultivator, set 112 apple trees 2 rods apart, and peach trees between, both ways. The eighth year he had 228 barrels of apples, and in a few years from setting the trees, $400 worth of peaches in one year; and the best part of the story is, that large crops of vegetables were raised on the same land, nearly paying for the manure and labor. The tenth year from setting, many of the apple trees produced 4 or 5 barrels each, the land still yielding good crops of vegetables, the peach trees having mostly gone by old age. Mr. J. grafted a tolerably large pear tree to the Bartlett, and the third year it produced $30 worth.

"Mr. S. Dudley, a very successful cultivator in Roxbury, an adjoining city, sold the crop of currants from one-eighth of an acre, for $108, the next year for $125, and he had good crops for several years. He picked 500 quart boxes from one-eighth of an acre, the next season after setting the bushes in the fall. He had $25 worth of cherries from one Mazzard tree.

"We saw, in Natick, Mass., on the banks of the 'Classic Charles,' on the farm of M. Eames, Esq., an apple tree grafted to the Porter, when 75 years old; it soon bore, and the seventh year it produced 15 barrels, which sold at $30. The original Hurlbut apple tree, produced 40 bushels in one year, and 20 the next. The original Bars apple yielded 60 bushels in one year. N. Wyeth, Esq., Cambridge, in this region, had from a Harvard pear tree 9 barrels of fruit, which sold for $45.

"A farmer would not plant an orchard, thinking he should not live to eat the fruit; his son had the same views; but the grandson planted for posterity, yet his predecessors shared in the fruit also, for the grandfather drank hogsheads of the cider.

"Hovey states that a Dix pear tree, in Cambridge, produced $46 worth of fruit at one crop. We saw in Orange, N. Jersey, 100 bushels of apples on a Harrison tree, which would make ten barrels of cider, than selling at $10 dollars a barrel in N. York.

"Downing says, that the original Dubois Early Golden Apricot, produced $45 worth in 1844, $50 in 1845, $90 in 1846. A correspondent of the 'Horticulturist,' says that Mr. Hill Pennell, Darby, Pa., has a grape vine that has produced 75 bushels yearly, which sell at $1 a bushel. Jas. Laws, Philadelphia, has a Washington plum, that yields 6 bushels a year, that would sell for $60. Judge Linn, Carlisle, Pa., has two apricot trees that yielded 5 bushels each, worth $120. Mr. Hugh Hatch, of Camden, N. J., has four apple trees that produced 140 bushels, 90 bushels of which sold at $1 each. In 1844, a tree of the Lady Apple, at Fishkill Landing, N. Y., yielded 15 barrels that sold for $45."—*New-York Cultivator.*

Now in our belief, the people of Virginia know already, or could quickly learn, as much about raising apples and currants, and pears, and peaches, and apricots, as the people of Massachusetts; but what they need is an equal *motive to learn;* which motive, is to be supplied by an *equal market.* Did they not already know as well as we, we could easily tell them, how to ensure good crops of them all. Have not our humble selves been teaching them that, for more than thirty years? Besides keeping constantly posted up, as to the progress of all that takes place to promote actual improvement in these things in our own country, reading all that is published in books and papers, we have within twelve months, paid not less than $200 for foreign works, and periodicals on agriculture and horticulture, in all their branches, and in various languages; but we might engage to find, in old volumes of the "American Farmer," 25 or 30 years ago, all the requisite information for those who desire to be informed; but what would be the *practical* benefit, even to the few who are deficient in information? The question is, *who is to buy* their pears, and their currants, and apricots, their califlowers, and cabbages, and roses, and lilies, and a thousand things that serve to gratify their wants, and to charm their senses, where abundant and diversified employment serves

at once to multiply the wants of men, and to create the ability to indulge in a thousand things, too delicate and perishable, or too bulky to bear transportation to distant and uncertain markets; along with their three everlasting staples, corn, wheat and tobacco—tobacco, wheat and corn—all to be consumed at a distance; and all carrying off every year the very life-blood of the land, and all subject to numerous charges on their way between the producer and the consumer, *and always at the cost of the former?*

Suppose, in these States, public attention to be turned to the cultivation of fruits and vegetables, where will they find, or how persuade, men to buy that which they themselves are cultivating for sale? One man may lead a horse to the brook, but a thousand men can't force him to drink when he gets there! Hence it is that being driven ourselves once more to look around for bread, and reflecting how we can make our labors useful to that class to whom we have ever been partial, we have deemed it to be a more important duty to teach the land-holder, if we can, how he is to *secure a market* near his land, for the produce of his land, rather than *how he can increase that produce.* Only let him learn how to create the former, and the supply will follow as assuredly as effect follows cause throughout the universe. Let him but force the law-maker to establish a policy that will ensure adequate return in labor engaged in manufactures; such a policy as will lead to the building of furnaces for smelting all his own iron with his own coal; and mills that will ensure demand for his own wool from his own flocks; and coach factories that will create demand for his useless timber; and in a word, the various manufactories for the production of articles now made abroad; when the land-holder has made up his mind to do all this, then, and not till then, will he have customers at hand for his fruits and his vegetables, his milk and his butter, his beef and his mutton. Then, and not till then, he too may have $125 for the currants of an eighth of an acre, and $45 from the fruit of one pear tree, and 100 bushels of apples from another tree, equal to ten barrels of cider, worth $100, and $90 for the fruit from one "Golden Apricot." Reader, we put it to yourself—which do you most desire to be told—how to produce, or how to secure a market where to sell? If in the present condition every farmer in Virginia or Alabama could grow 500 bushels of pears on every tree, or as many of currants on an eighth of an acre, what would he do with them? All would be growers and no buyers! Tell your law-givers, then, to insure reward to people qualified for *other* industries, to come and settle in your State, instead of forever crying *"free trade!" "free trade!"*

Potato Flour.—An importation having taken place from abroad of a quantity of farina, or potato flour, the importer requested that it might be regarded in the same manner as wheaten flour, and delivered at the duty of 4½d. per cwt.; but as the article appears to be not only serviceable for food, but also as an important material in the manufacturing process, it was decided to be liable to the *ad valorem* duty of 10 per cent. as a manufactured article, and ordered to be charged accordingly.—*English paper.*

Turning a Prize Pig to Account.—A rather ludicrous story is now going the rounds of the clubs, with reference to a Yorkshire Yeomanry Corps. The other day at York, while a captain was inspecting his troops upon the parade, he observed one of his men decorated with a medal. "Holloa, my lad!" exclaimed the captain, "I did not know you were ever in the Regulars. What action did you serve in?" "Lawk, sir," replied the Yorkshire trooper, "I was never in t' wars, not I; but my old sow won this at the Thrisk Cattle Show, so I pops him on t' my breast, thinking how it looks warlike."

Sale of Horses.—The exportation of horses this year from Ireland to England has been unparalleled for a number of years. Mr. Dawson sold a lot of seventeen first-class hunters to Mr. Murray, of Manchester, for the enormous sum of two thousand three hundred pounds*, a price for a "lot" from one dealer to another without precedent in this country.

* $11,500, or $676 for each horse.

WOOL AND WOOLLEN FACTORIES IN TEXAS.

"The first woollen factory in Texas is just going up on the banks of the San Antonia river. The proprietors intend to manufacture the coarse woollens, which they will furnish cheaper than they can be imported. The San Antonio and San Marcos rivers abound with favorable sites, and an inexhaustible quantity of water power. The country is admirably adapted to the raising of sheep. All articles of food are cheap, the climate mild, and every thing is in favor of the new enterprise."

It is with infinite pleasure that we place before our readers the above from the "Providence Journal," in evidence that the people of Texas are opening their eyes to the importance of bringing the loom and the anvil to take their places by the side of the plough. We have just seen that ship-load after ship-load of immigrants are embarking in Europe *for Texas;* and this is the policy that will swell the tide of immigration. The country that thus *diversifies* employment, will always attract the foreigner, and elevate those whom it attracts. Of all the portions of this country, there is none more admirably calculated for *wool-growing* on an extensive scale, than that in which we have now to record the commencement of the first effort at making a market on the land for the products of the land—the first at least that has met our notice.

The recent exploration of the Rio Grande, the report of which by Major W. W. Chapman, to General Jessup, has been recently published, shows, that at a trifling expense, that river could be made navigable for *fourteen hundred miles;* bringing into activity a vast extent of fertile land, as well as an extensive pastoral country, peculiarly adapted to sheep cultivation.

"There are," says the report, "many fine mill sites on the streams, and nearly all have excellent water power. They abound with perch, and the regular speckled trout of our northern mountain streams. Captain Love says, that he frequently saw herds of black-tail deer, numbering two or three thousand. He also saw immense droves of wild horses and cattle. He describes this country as the finest in the world for grazing, and believes it capable of sustaining *almost any given number* of sheep and goats. From the mildness of the climate, sheep in this region, and, in fact, along the *whole valley of the Rio Grande to its mouth*, require no sheds during the winter months—and it is also unnecessary to cut hay for them, as they can *graze the entire year.* The sheep along the valley of the Rio Grande seem to be free from the diseases so common at the North. From this fact, the small expense in taking care of them, and the first cost, (about fifty cents per head,) this will become a very lucrative business.

"There is an extensive mine of bituminous coal on the Texas side, about 12 miles above Fort Duncan."

While the peculiar advantages of Texas for sheep husbandry are thus brought to light, facts have been exhibited in the "Plough, the Loom and the Anvil," by the kind agency of Mr. Browne, of Philadelphia, in reference to the *quality* of our wool, which demonstrate that of all countries in the world, there is none in which the sheep thrives better, or *yields a finer fleece*, than our own. This will be proved by samples which he will send from five different States, to John Bull's great Industrial Convention in London, designed to humbug the world and to induce it yet longer to look to England as the great workshop of the world. In the meantime our woollen mills are being closed, and the production of wool is declining, because our farmers refuse to take *for themselves* the protection, by aid of which they would be enabled to bring to their sides millions of European women and children, who would drink their milk and eat their corn and potatoes, while engaged in converting their wool into cloth. Our government furnishes ships to aid in making up the great museum, which John Bull is now opening

for the purpose of bringing the people of the world to eat his potatoes and cabbages, and buy his wares; but it refuses its aid to the farmers and planters of our own country for bringing the now almost starving paupers of Europe to eat the potatoes and cabbage grown at home! We trust, however, that the time is not far distant, when those farmers and those planters, will awake to an understanding of the fact, that nations that *export raw produce, must always impoverish both their lands and themselves!* and that the only road to perfect freedom of trade, lies through that perfect protection, which enables the manufacturer to take his place by the side of the agriculturist—as recommended by Mr. Jefferson, in 1816. So almost limitless is now the expanse of our country, that one-half of it does not know what the other is about. How few know that from *Point Isabel,* the shipping port for the immense valley of the Rio Grande, *steam-ships are already plying weekly to New Orleans,* say about seventy hours' run, thus affording a market for their sheep! Truly, what a great country ours would be, could we one and all resolve to be no longer, as General Jackson said, "*subject to the policy of British Merchants.*"

VIRGINIA AND ITS NATURAL ADVANTAGES.

THE VIRGINIA CENTRAL RAILROAD.—A meeting was held in Richmond, (Va.) on the 1st instant, to take into consideration the extension of the Virginia Central Railroad from Staunton to Covington. A preamble stating that, whereas, by an act passed at the last session of the General Assembly, the capital stock of the company was increased to the sum of $700,000, three-fifths of which are to be paid by the State, when two-fifths are raised by others than the Commonwealth, was followed by a resolution, unanimously adopted, that the city of Richmond ought to subscribe at the proper time the full proportion of the said three-fifths.

We rejoice in every new evidence, that the ancient dominion—the mother of States—is awaking to the importance of bringing into activity its vast internal resources. Of all the States in the Union, their is not even a single one possessing the advantages of Virginia. Coals, iron ore, lime, marl, and water power abound, and she has facilities of intercourse through her extensive territory, exceeding those of any other, and would her farmers and planters but unite their efforts with those of Pennsylvania and the North, for the adoption of measures to enable them to draw to their sides consumers of their products, she would speedily resume that place among her sister States, to occupy which she was destined, and which she would now be sure to occupy, had her leaders been a little more practical and a little less addicted to abstractions. The same paper that informs us of this effort for the making of railroads, likewise informs us that her mines, her furnaces, and her mills, are being closed, and that instead of increasing the market on her land for the products of her land, she is diminishing it from day to day. We entreat our Virgina readers to mark the fact, that the closing of mines and furnaces tends to compel miners, and furnace-men to seek the West, there to become farmers, and to drive their present customers into the position of rivals. She can compete with the world in the production of wool, of woollens and of iron, and she will do so whenever she shall come to be considered that General Jackson was right when he said that "we had been too long subject to the control of British merchants." She needs a new declaration of independence, and if Washington, Jefferson, Madison, or Monroe, were at the head of her affairs she would have it.

MARCH OF INTELLECT.—An eminent auctioneer had lately an estate under the hammer, and after enumerating its qualities for agricultural purposes, he added:—"It presents its fertile bosom to the orb of day, and drinks up the solar fire."

ON RAISING AND BREEDING SWINE FOR THE BRISTLE.

BY P. A. BROWNE, LL. D.

Of Bristles.—The word "bristle" (*bristl*, Sax.) is defined, "the strong hair which grows and stands upright [but it does not stand upright or at right angles] on the back of the boar, &c." The French call it "soie," *poil long et rude du cochon, du sanglier*, etc. But *soie* also means silk, and therefore this name is improper.

Of the Hog.—Aristotle (who divided quadrupeds into three kinds, viz: those with the *hoof entire*, those with a *cloven hoof*, and those with *claws*) was at a loss where to place the hog, on account of some being found in Illiria with the *hoof entire*, and of an opinion, then prevalent, that there were others to be seen, in some places (but where is not mentioned) with *claws*. In regard to the *solipede* hogs, they are noticed by Linnæus (sus ungulis simplicibus) and are said to have once been known in some part of England,* and still to be in Upsal, in Sweden; but the variety with *claws*, if they ever did exist, is not now known.

Linnæus places the hog in his 5th Order, *Jumenta*, No. 28, "*Sus*," of which he furnishes descriptions of four species; but three of them have been since transferred to other orders. It is well known that neither Buffon nor Goldsmith paid much attention to classification; but Cuvier and his followers put this animal in the order *Pachydermata*,† in the second family (of ordinary pachydermas) in which there are five genera, viz: the hippopotamus, the hog, the rhinoceros, the damain and the tapir. The Genus Hog (sus) is divided into three species, 1, the hog proper; 2, the phacochæres; and 3, the pecary. We shall, at present, confine our remarks to the first of these species.

The wild boar and the domestic hog breed freely together; and therefore, the latter is generally believed to have descended from the former.

There are a great many varieties of the hog; Linnæus mentions five, but the author of Illustrations of Natural History enumerates twenty-three.

The hog has two canine teeth in each jaw, which project from the mouth and incline to each other, four to six superior, and six inferior incisors, and twenty-four to twenty-eight grinders; those of the latter, at the bottom of the mouth, having tuberculous crowns, but those nearer the front being more or less compressed and cutting. This dental disposition shows that the animal is *less herbivorous* than some others of his order. The hog never sheds his teeth, like some other animals. His head is large, keel-shaped (carinatus) and hornless, the snout long, the eye small, the stomach large, but *single* (which accords with his being a *non ruminant*.) He has four separate toes; but walks upon two of them only, his skin is thick and his tegumentary appendage is *hair* of different varieties, according to the different breeds, climates and nourishments. The number of tits of the female are said to be ten or more, and not to exeeed twelve; but we are assured by breeders that they often exceed the last number. She has from fifteen to twenty pigs at a birth, litters twice a year, and has been known to do so even thrice in fourteen months.

The *fat* of the hog forms a thick layer between the flesh and the skin, and is very voluminous; consequently his sense of feeling is obtuse, but he enjoys the senses of hearing and smell in a good degree, and in his wild state is said to be very delicate in his taste;‡ but when domesticated, becomes a filthy glutton. He is naturally inactive and drowsy, but liable to be excited by storms of wind and the distressing cries of animals. The general limit of his life is from fifteen to twenty years. The Israelites are forbidden to eat this animal. "And the swine, although he divide the hoof and be cloven footed, yet he cheweth not the cud; *he is unclean to you.*" (Lev. ch. xi. v. 7.)

The Mahometan is prejudiced against eating hogs' flesh, but most other people find it a pleasant, substantial, and nutritious food. Pork takes salt better than any other flesh, and consequently it always makes an important article in naval stores. The fat of the hog, or lard, is used as a burning fluid, and in various culinary and medicinal preparations; the skin is used in manufactures, the hair for stuffing mattrasses, cushions, &c., and the bristles are indispensable to the saddler, the shoemaker, the painter, and brushmaker.

Many essays have been written to encourage the breeding of the hog, for his *flesh* and his *fat;* but this is the first attempt to recommend *the breeding of swine for the* BRISTLE.

No one, unless he has bestowed particular attention to the subject, is aware of the large quantity of bristles that are used in the United States. No true American but will regret to learn what a large proportion of these are *imported from foreign parts.*

---

* See Illustrations of Nat. Hist. † Thick-skinned. ‡ Of 243 plants he eats 72 only. (Lin.)

By correct information obtained from the Registrar's Office of the Treasury Department, we find, that during the last five years, there have been imported into the United States, an annual average of 383,264 lbs. of bristles, worth $174,311.

We maintain, and hold ourselves ready to show, that instead of this, *we ought to supply ourselves with bristles and export them to foreign countries!*

It will not be denied that the principal properties for which a bristle is esteemed, are,

1st. Its length.
2d. Its thickness.
3rd. Its strength.
4th. Its ductility.
5th. Its elasticity.

These properties are possessed and combined in various degrees in the bristle of different breeds of swine; and, as all know, that by a judicious breeding of sheep, the fleece may be improved in all these respects, so one can find no difficulty in understanding that, by similar care and attention in *breeding and raising the hog, the bristles* may be improved in almost every degree that the farmer may desire.

But here we are met with an objection which is not well founded, but which is formidable, (because of its plausibility), to those who have not paid much attention to the subject, viz., that in endeavoring to improve the bristles we will injure the flesh and the lard. Now, we do not pretend to deny, that the production of an *immense amount of fat may* injure the quality of the bristle; every ounce of *abnormal* adipous tissue is so much abstracted from the tegumentary appendages; but when we consider that superabundant fat, if it be not an actual state of disease, is something very much like it, we will not be so apt to regret that it is curtailed within due bounds; especially if we are repaid for the loss of it, in a valuable bristle. Besides, bristles of *great softness*, although not remarkable for length or thickness are imported for paint brushes, and what objection can our opponents have to breeding hogs for these bristles? Recollect that *softness* depends upon ductility and elasticity, and examine the Pennsylvania bristle, No. 1. for these qualities.

We have in our collection of pile seventeen varieties of bristles, which, being classed according to their *length*, rank as follows:*

		Length.
1	The Russian domestic hog, No. 1,	12½ inches
2	The French do do do	12 "
3	The Russian wild boar,	9½ "
4	Another French, No. 2,	8½ "
5	The Russian O.Katka, No. 1,	7½ "
6	The Pennsylvania, No. 1,	7 "
7	The Ohio, No. 1,	6½ "
8	The Pennsylvania, No. 2,	6 "
9	Another Russian O.Katka, No. 2,	6 "
10	Another Russian domestic, No. 3,	6 "
11	The German, No. 1,	5 "
12	The Pennsylvania, No. 3,	5 "
13	Another Ohio, No. 2,	5 "
14	Another Ohio, No. 3,	4½ "
15	The Pennsylvania, No. 4,	4 "
16	Another Ohio, No. 4,	4 "
17	The Flanders,	4 "

The first observation worthy of remembrance is, that the longest bristle is from a hog of *domestication;* and, it is probable that the Russian domestic hog is derived from the wild boar of that country, that the bristle has improved in length three inches by the care and attention of man.

In the next place, we find the longest bristle is 12½ inches, and the shortest is 4. The longest bristle in the United States, (Pennsylvania No. 1, which is 7 inches,) to reach this ultimatum, must be increased 5½ inches; but it already exceeds in length the shortest foreign bristle (the Flanders of 4 inches) by 3 inches. There is no doubt, therefore, that, *in breeding for length of bristle*, by simply selecting, for breeding, those hogs only which have the longest bristles, we can cause our bristles to ascend in the scale of length, if not arrive at its summit.

In ranking our seventeen specimens according to their *thickness*, we have the following table:

		Diameter.
1	The Ohio, No. 1,	1.45th part of an inch,
2	The Ohio, No. 4,	1.68 "
3	The Ohio, No. 3,	1.68 "
4	The Pennsylvania, No. 2,	1.68 "

* Full table of all these properties will be introduced into our book on hair and wool.

		Diameter.	
5	The Russian O.Katka,	1.68th part of an inch.	
6	The Pennsylvania, No. 3,	1.79	"
7	The Pennsylvania, No. 1,	1.79	"
8	The French,	1.79	"
9	The Russian wild boar,	1.80	"
10	The Pennsylvania, No. 4,	1.90	"
11	The Ohio, No. 2,	1.90	"
12	The German,	1.90	"
13	The Russian, No. 3,	1.90	"
14	The French, No. 1,	1.90	"
15	The Russian domestic, No. 1,	1.60	"
16	The Flanders,	1.145	"

Here we find that the Ohio No. 1, (which ranks only 7 in the scale of length) takes precedence of all the rest in this table; being twice as thick as the Russian domestic No. 1, (which so much outmeasures it in length) Here is then a fine breed to work upon, when desirous of increasing the *thickness* of the bristle.

The next table to be constructed is one of *strength*, of one inch fibres, in which the principal specimens rank as follows:

			Grains.
1	The Russian O.Katke	broke with	38·263
2	The Ohio, No. 1.	"	35.874
3	The French, No. 3.	"	35.397
4	The Pennsylvania, No. 1.	"	23.984
5	The Russian, No. 5.	"	18.354
6	The French, No. 1.	"	17.000
7	The Russian wild boar,	"	16.012
8	The Flanders,	"	11.624
9	The Russian, No. 1.	"	10.000
10	The German,	"	5.576

Next to the O. Katke, the Ohio, No. 1, is the strongest bristle in our collection. It is more than twice as strong as the Russian wild boar; three times as strong as the Flanders, and more than six times as strong as the German.

The following is the table of *ductility* of one inch:

				Grains.
Pennsylvania, No. 1.	stretched	63.90	with	23.984
The Flanders,	"	43.90	"	11.205
The French, No. 1.	"	30.90	"	17.000
The French, No. 2.	"	28.90	"	31.901
The Russian, No. 5.	"	25.90	"	18.354
The Russian wild boar,	"	22.90	"	14.264
The Russian O.Katke,	"	10.90	"	34.624
The Ohio, No. 1.	"	4.90	"	34.124
The German,	"	4.90	"	4.266
The Russian, No. 1.	"	2.90	"	9.500

In ductility the Pennsylvania, No. 1. stands pre-eminent, one inch having stretched to the length of nearly one inch and three-fourths.

The table of elasticity, of one inch.

					Grains.
The Ohio, No. 1.	lost none of its elasticity		with		34.124
The Russian No. 1.	lost none of its elasticity		with		9.500
Do. do. 5.	lost none of its elasticity		with		14.858
The German lost	2.90	"	"		4.266
The O.Katke lost	3.90	"	"		34.624
The Russian wild boar lost	10.90	"	"		14.264
The Penn., No. 1. lost	19.90	"	"		22.236
The French, No. 2. lost	28.90	"	"		31.901
The French, No 1. lost	30.90	"	"		17.000
The Flanders, lost	30.90	"	"		11.205

Here again the Ohio, No. 1, is first upon the list, notwithstanding its great diameter and the weight that was applied. It is true that its ductility was only 4, but the German with the same ductility lost 2 of its elasticity.

Upon the whole, then, the bristles of the United States, stand high in good qualities, and may easily be improved, so as to compete with any in the world.

THE LAFAYETTE CATTLE SHOW IN MARYLAND—26 YEARS AGO! AND THE LAST EXHIBITION OF THE MARYLAND STATE AGRICULTURAL SOCIETY—WITH SOME REMARKS ON BOTH.

BY THE EDITOR OF THE "PLOUGH, THE LOOM AND THE ANVIL."

THE time of the last Fair at Baltimore, exactly completed twenty-six years, since the one held at the Maryland Tavern, four or five miles out, which we call the Lafayette show, as it was postponed a month, for the sake of the attendance of the "NATION'S GUEST" at that time. The writer of these lines who was honored with his personal friendship and confidence, to the day of his death, having ascertained that, although it would be particularly gratifying to him to witness such an exhibition, previous engagements would render it impracticable to do so at the time which had been named, and it was accordingly postponed to meet his convenience. And well does the Editor of this journal remember the earnest asseveration of the old General, that, of all the numerous gatherings to receive and welcome him, none could be more congenial to his taste and feelings, than was the assemblage of the Farmers and Planters of the old Maryland line, to take him by the hand, and to exhibit to him the fruits of their agricultural and household industry, and to let him observe their then semi-centennial progress under the free institutions for which he, shoulder to shoulder, had fought and conquered with their Fathers of the Revolution.

Of the last Fair, of the same kind, at Baltimore, after the lapse of another quarter of a century, a full and clear account will be found, in that "same old coon" of a paper, the "American Farmer," which ought to be, if it be not, on every farmer's table, since it might be there for less than a bushel of wheat.

As the particulars of all such Fairs are comparatively of local and State interest and competition, rather than of National concern—and as most of our readers, within the sphere of those who took part in it, will have already seen the official account of them, in that excellent Journal—instead of repeating them here, it occurs to us that it may possibly prove more acceptable, if only as an incident of agricultural history, to reproduce, after a lapse of twenty-six years, what then transpired in the same cause, and on the same theatre. Mingled, it may be, with some reminiscences of a mournful cast, this resurrectionary account of what was then doing, accompanied by the venerated names of the actors then upon the stage, may serve to call up some pleasing remembrances in the minds of the few—alas! very few—who survive, not alone their companions, but it may be all public remembrance of those men and those times. Nor can it be supposed that such a recurrence to times and incidents long passed, will be any the less attractive for the descendants of the many who have been finally summoned from the field of their usefulness. Descendants and friends of Ridgely, Smith, Howard, Harper, Oliver, Thompson, Caton, Coxe, Somerville, Cooke, Kent, Emory: alas! how many might be added to the roll, could it serve to express the reverence due to their memory, or lend force to their good examples.

Nay, we should be tempted, if we had room now, as we may possibly have some day, to republish the full reports of the Committees at the Fair of 1826, in the persuasion that it might be useful in affording some means of better judging of the "advancing state of agriculture," complacently spoken of on this occasion. It would show how far we have advanced in productiveness since the premiums then awarded

To James C. Gittings for 3 tons 12 cwt. of Hay to the acre, on 20 acres.

To John Mercer, for 631 bushels of *Parsnips* on "rather less than an acre."

To Ditto, for 675 bushels of Carrots on "rather less than an acre."

To Robert Oliver, for 640 bushels Rutabaga per acre,on 6 acres.

To Robert Carnan, for 75 bushels and over, of Corn, per acre, on 7 acres, 1 rood and 39 perches.

To David Williamson, for 301 bushels 31 quarts of Corn, and 371 bushels of Potatoes, on 6 acres, 1 rood and 12 perches.

To Michael Bartholomew, for 5 hogsheads Tobacco, 3966 lbs., sold for $31.80 per cwt. $1,257.20.

Second prize, to T. B. Dorsey, for 5 hogsheads Tobacco, 3653 lbs., sold for $30.75 per cwt. $1,124.45.

BALTIMORE, *Friday, November* 26, 1824.

THE WESTERN SHORE CATTLE SHOW.

The editor's attention has been so much engrossed during the week by the Agricultural Exhibition, that he has found it impossible to prepare a detailed and satisfactory account of it.

The first day of this grand annual farmers' festival passed most happily. The weather was uncommonly fine, and the display of all sorts of domestic animals—specimens of crops, butter, domestic wines and household fabrics, &c., &c., altogether far exceeded any thing hitherto witnessed. The conviction of the great utility of these public agricultural displays, seems now to have taken fast hold of the public mind, and to pervade so extensively every part of the state, that gentlemen were attracted to this one from the most distant points. Not less than fifty horses of superior quality, and of different ages and classes, passed under inspection. Nearly one hundred neat cattle; a great number of sheep, and the pens for swine were so filled that it became necessary to erect many more after the exhibition commenced. Unexampled improvement was observed to have taken place in this class of animals. The great satisfaction expressed by all, enables us to congratulate the state on the permanent establishment of these shows, and the number of sales of stock of improved blood, evinces, that to them the farmers will look hereafter as to a common market, where domestic animals of the highest grade of excellence will be sold and bought, and their blood diffused throughout the country.

The second day was occupied in the examination of household manufactures, which were ten times more various than at any former exhibition, and were much admired by the ladies who attended to inspect and encourage them.

The samples of butter were more numerous than heretofore, and the quality will be proclaimed in the reports of the judges. The ploughing matches, with oxen and horses, were well conducted, though on ground rather unsuitable, but

The third day, was above all interesting and honorable to our Association, as it was distinguished by the arrival and the good offices of the "Nation's Guest" himself, who came to give by his cheering and gracious presence, a spur to these peaceful conflicts of the plough, which, beginning in a spirit of generous and patriotic emulation, invariably tend to the promotion of the public welfare. General La Fayette, accompanied by the Honorable Robert Smith, president of the society, arrived on the ground about eleven o'clock. He was escorted to the field of exhibition by Governor Sprigg, at the head of a detachment of his well disciplined volunteer cavalry, and was accompanied by his estimable son, and secretary, by the mayor of our city, and the committee of arrangement; by W. W. Seaton, Esq., on the part of the corporation of Washington; by Governor Barbour, of Virginia; Governor Dickerson, of New Jersey; Dr. Kent, of the House of Representatives; and Col. Emory, of the Executive Council; with many members of the legislature of Maryland, and an honorable and numerous body-guard of *substantial sunburnt farmers.*

On his entrance, a long avenue was formed by the members, through which he passed to the head of the enclosure, where plain and suitable arrangements had been made for his accommodation.

In a short time General Harper, by appointment of the society, rose and delivered a very able, eloquent, and highly instructive, and gratifying, practical address; when he finished, the chairmen of the several committees came forward and read their reports, and the fortunate competitors being called, appeared, and passed through a large circle, formed by the members, to receive the trophies of their industry and skill, from the hands *of the gallant, the disinterested soldier of liberty, the veteran companion of Washington*, and the unvarying friend of America.

It would be difficult to define the impression made by this part of our ceremonies, as it would be to anticipate and describe its salutary effects, in favor of the general husbandry of the state, and the particular objects of our institution. Here, for once at least, Agriculture saw her importance recognized, and her dignity confirmed,—more than five hundred of her hardy sons, beheld the very man, the same La Fayette, whose disinterested patriotism and chivalrous sacrifices* by the side of their fathers, in the cause of American freedom, is associated with all they know of their country's independence—there he stood, full in years, yet fuller in virtue, as if waking up from the slumbers of half a century, through which a benignant Providence had preserved him, to realize the vision of his immortal compatriot, *Franklin!* and to contemplate with benevolent delight, the increase of his countrymen in numbers, and in strength; enjoying all the means of national happiness, and all the resources of national power and safety—appearing amongst us now to give his benedictions, especially to the *plough*, and to receive the benedictions of those, who now, more than ever, will be proud to follow the plough. It was, altogether, a spectacle so fascinating, so impressive, so productive of strong and interesting emotions as we can never hope again to witness; how striking was the mixture of alacrity and diffidence, of pride, and of reverence, with which every one stepped forward to receive his premium, with the smiles and the good wishes of one of the noblest champions that ever drew his sword in defence of human freedom! Let then, these premiums be inscribed "By the Agricultural Society through the hands of *La Fayette*," and let them be handed down from generation to generation, to be cherished yet more and more, until the time shall arrive, which God forever postpone, that the American farmer shall cease to sing at the tail of his plough, of Liberty and La Fayette.

After the delivery of the premiums, the farmers on the ground, at the invitation of the editor of the American Farmer, formed themselves into two lines, between which the General passed, most graciously shaking each one by the hand; and then, he was invited to a seat at the head of the table, on the right of the president of the society, supported by the Mayor and Doctor Kent on his right'; and on the left of the president, sat the orator of the day, Governor Barbour, of Virginia, Col. Emory, and other practical farmers of distinction, whose presence gave countenance and encouragement to the views of our association.

It was a source of regret that Col. Powel, corresponding secretary of the Pennsylvania Agricultural Society, who had on this, as on previous occasions, favored us with his company and his judgment, was compelled by other engagements to leave vacant the conspicuous seat which had been assigned him.

The dinner, provided by Messrs. Watson & Harrington, was substantial and excellent, doing credit to them and giving universal satisfaction.

When the dinner was over, the following toasts, prepared by a committee appointed for that purpose, were announced by the President, and repeated by George Cook, Esq. and by Col. J. G. Davies, from the centre and the foot of a table calculated for 250 people.

1. *Our Country.*—A store-house to which the world may resort, for the seeds of republican institutions, national independence, and private virtue.

2. *Our Country's Father.*—His first care was given to his country's safety — his second to its cultivation.

3. *Our Country's Friend.*—the Nation's Guest—Like Washington and Cincinnatus, he beat his sword into a plough-share, and when it was no longer wanted for the defence of liberty—*with thirteen cheers!*

Whereupon, Gen. La Fayette rose and said, that in his double capacity of an American patriot and a practical farmer, he had the most affectionate acknowledgments to proffer for the honors and gratifications conferred this day upon him. He begged leave to propose the following toast:

The seed of American liberty, transplanted on the other shore, oppressed, not destroyed, by every sort of European weed—may it rise again, vigorous, and pure, and cover the soil of both hemispheres.

4. *The President of the United States:* he has done a good day's work. The flock which he has tended has increased and multiplied, and its condition is his pride and his reward.

5. *The Plough, the Loom, and the Ship:* all indispensable for prosperity; the first for existence.

---

* In a late agricultural excursion to the eastern shore of Maryland, the Editor had the happiness, to make by invitation, a visit to the residence of Mrs. Tilghman, relict of Col. Tilghman, one of the favorite aids of Washington; when this venerable matron of the Revolution, full of grace and affability, and rising in the respect and affection of her friends as she declines in the vale of life, showed him the original letter of introduction, brought by Gen. La Fayette to Col. Tilghman, from Mr. Carmichæl, then Secretary to our Commissioners in Paris, wherein he commends him to his best attention, as a young nobleman of the first family and the best prospects in France.

6. *Roads and Canals:* which increase the products of industry, by bringing the farm, the workshop, and the wharf, nearer together.

7. *Household Manufactures:* The National Savings' Bank, where all the scraps of industry are collected and turned to account.

8. *The Ox:* Most useful in life, at the smallest cost, which he repays at his death.

9. *The Cow:* The best emblem of abundance, which she contributes most to create.

10. *The Sheep:* Which supplies our best clothing, while he is preparing our best food.

11. *The Farmer of La Grange:* Let the gratitude of the sons of his fellow-laborers in the field of our revolution, secure to him a rich harvest of renown from the seed then sown.

12. *The principles of Free Government:* The light gleams through the night of slavery, and will increase to perfect day.

13. *Woman:* Heaven's best gift here below; the Farmer's toils, like the dangers of the soldier, and the statesman's cares, are sweetened by her smile, and rewarded by her affection.

VOLUNTEER TOASTS.

By Gen. La Fayette: The Maryland Farmers; the ploughshare, into which their swords, after the revolution, had been turned, became again in the last war, a victorious sword.

Governor Barbour next rose, and after a few appropriate remarks, delivered in his own impressive and eloquent manner, thanking the society for their kind attentions, and declaring the peculiar pleasure which he always finds in the company of those, who, like himself, rely for their support, exclusively, on the cultivation of the soil, gave,

The Agricultural Society of Maryland: May its liberal example be an object of universal imitation.

By Capt. Jacob Hollingsworth: The President of the Board of Trustees of this Society; Gen. Charles Ridgely, of Hampton, whose absence, and yet more, his indisposition, we all regret.

By the Orator of the Day: Brother Jonathan's three daughters, Agriculture, Manufactures, and Commerce; Let not the first-born, who nursed her younger sisters, and feeds the whole family, be neglected by their father.

By the Editor of the American Farmer: The ladies who sent their beautiful manufactures to our exhibition; of such it may be said, as of the virtuous woman in holy writ, "she looketh well to the ways of her household; and eateth not the bread of idleness."

By James Howard: Our distinguished agricultural guest; our country has richly profited by his practical knowledge of the *drill* system.

By the same. *George W. La Fayette:* The patriotic son of a patriotic sire; like will produce its like.

By G. W. La Fayette: The favorite motto of American and French farmers—Liberty.

By W. C. Somerville: Our government; May she always keep the beams of our ploughs, the beams of our ships, and the beams of our looms in motion; never forgetting that ploughs, ships, and looms are like the sun, which, when shorn of his beams, sheds "disastrous twilight" on a nation.

By an officer of the Society: Col. J. H. Powel, whose excellent knowledge, like his excellent stock, is diffused through the country for the improvement of its best interests.

By Mr. Chubb, of Richmond: Our mother earth; like fair woman, the source of our greatest joys, if treated with tenderness and attention.

By James Howard: Mr. Le Vasseur; "*Noscitur a sociis.*"

By Mr. Le Vasseur:—Preceded by brief and pertinent remarks, in the French language, interpreted to the company by his companion and friend, G. W. La Fayette, expressive of his thanks and gratification at the civilities which were here, and every where extended to him as the friend of Gen. La Fayette—The Maryland Farmers, who know how to use the sword as well as the plough.

By H. V. Somerville: Agriculture; the favorite pursuit of Washington and La Fayette, who like Regulus of old, preferred the cultivation of their farms, to the command of armies.

By H. Schroeder: Liberty, genuine rational liberty; may the universe become its temple, and the heart of every man its altar.

By Isaac Munroe: The presidential ploughing-match; let the best ploughman have the premium.

By J. S. Williams: The products of the seed which our guests assisted to sow in our Revolution, they have well repaid his labors.

By Robert Riddle: Agriculture, ancient and honorable; productive of peace, independence and plenty; its pursuits are alike innocent, useful and happy.

By D. Jenifer: The State of New-York; in internal improvements, may the State of Maryland follow her example.

Agriculture's friend, *De Wit Clinton:* at whose command mountains melt away, rivers turn from their accustomed channels, and plenty, from her copious horn, poureth abundance over the land.

By W. F. Redding: The foreigners who, in '76, helped our fathers to beat and drive off the mischievous *Bull*, that broke into our national inclosures, to gore our people, and eat up their corn. Friends in *need*, are friends *indeed*.

By the Society: Mr. Coke of Holkham; the friend of farmers, the friend of Americans, and the friend of mankind.

By E. H. Cummins: The Maryland Agricultural Society, patrons of the noble art; that rejoices rather in creating, than destroying, the comforts of life.

By G. W. Warfield: General La Fayette, second to Washington in the hearts of our countrymen; may he live to see his beloved France as free and as happy as he now finds his children in America.

By G. Howard: Commodore Porter; ready and able, with pen or sword, to adorn the literature, and defend the honor of his country; called now to plough the ocean, he cannot as heretofore, award the premiums for ploughing our land.

The memory of Col. John Taylor, of Virginia, the great American Orator.

By J. S. Skinner: General S. Van Ransellear; his heart leads and his means freely follow, in the ways of public usefulness.

The following was offered as the parting toast by Dr. Grafton Duval, of Frederick—*Speed the Plough.*

The company then separated with a general sentiment of gratification and good wishes for the success of the society.

Early in the evening the General visited the theatre, to witness the performance of the favorite play of General Washington, the "School for Scandal," and never was play better performed. All exerted themselves to please, and all succeeded. Mr. Warren, in Sir Peter Teazle, was great in the great point, in which great playing consists: *he was exactly true to nature.* When the point of the play was developed in the screen scene, the General with his suite, retired to meet a large part of ladies and of agricultural gentlemen, who had been brought together for the occasion, at the house of the Editor of the "American Farmer,"* and afterwards visited at the residence of R. B. Magruder, Esq., the daughter and family of his old companion in revolutionary scenes: General Stricker, the soldier of two wars, and the patriot of all times.

Thus passed the day ever memorable hereafter in the annals of agriculture, as having been dedicated by American farmers to the entertainment of the Farmer of La Grange.

It was not until an hour since, that we could take pen in hand to give even this hasty record of its incidents, and as it was necessary to transcribe all the volunteer toasts, allowance is solicited for its imperfections, both in substance and details.

On the Cultivation of the Melon in France.—The finest kind of this fruit is the Cantaloup, and is brought to great perfection in the environs of Paris, where it is produced in immense quantities. It is covered with tubercles or warts, from which appearance the French give it the distinctive *soubriquet* of "Melon *galeux*." This delicious fruit, averages 7 or 8, or even 10 lbs. in weight, and exceeds 2 feet in circumference. The finest Melons could be bought in Paris this season for 15*d.* and 20*d.* The method adopted by the best growers near Paris, among whom may be named Messieurs Francois and Decouplé, is as follows: When the young plant has formed its second or third leaf beyond the cotyledon, the stem is pinched off, or "stopped." The effect of this is to make it throw out two lateral branches, which again are stopped beyond their sixth or seventh leaf. The plant now comes into bloom, and as soon as the fruit is set, two, or at the most three, are selected as the most promising, and all subsequent ones are pinched off as they form, so as only to have this limited number on one plant, to preserve its vigor and increase the sap. The seeds of this Melon are found to vegetate, even when transmitted to the East and West Indies, taken from the fruit as brought to table. They should be merely wiped and dried, but not washed. The French gardeners follow the same system in growing the immense orange-colored Pumpkin, or "Potiron," so extensively used to make vegetable soup on "meagre days." When is desired to produce very large Pumpkins, only one fruit is retained on each plant, all the others being suppressed. It may be well to mention, as the result of careful observation, that the climate of Paris enjoys a far greater portion of solar heat and light than the meridian of London.—*B. C. H., London, Sept.* 11.

---

* The present Editor of the "Plough, the Loom, and the Anvil."

THE LAST FAIR OF THE MARYLAND STATE AGRICULTURAL SOCIETY.

PROPOSING to return again to the last exhibition at Baltimore, with a view to such comments as we may suppose to be of sufficient concern to the general reader to warrant it; it must suffice now to say, that it was the unanimous and gratifying impression that it far exceeded its predecessors, in the number of people in attendance, the number and quality of domestic animals, implements, &c. As to cattle, the presence or absence of Mr. Patterson's unequalled herd of Devons would itself make a very wide difference. How far this exhibition proved the existence of a wider spread and deeper resolution on the part of the *mass of Maryland Farmers* to compete in future—how far it evidenced a more extended knowledge of the true foundations of sure and progressive and general advancement in agriculture, and of any *systematized and reliable determination* on their part, to "unite," as was "resolved" on, to secure such advancement, by the adoption of measures to ensure legislative respect to authorized statements of their grievances, and to put in force the only adequate means and influences that *can* secure the rights and prosperity of agriculturalists, to wit: *appropriate legislation and appropriate education* for their children—is another question—one which every one must answer for himself. Of this last mentioned disposition, the most promising sign which came under our notice, was the unanimous adoption of the following Report of a Committee distinguished alike for well known zeal and intelligence. The little work to which it refers is undoubtedly one that ought to be placed in the hands of *every Teacher and of every Farmer's son in the Union*, whether in school or out of it; while the very slowness with which it is called for, is enough to awaken the fear, that on the subject of *education* for their offspring *fitted* to their intended calling, Farmers have not yet become half alive! Without the slightest pecuniary interest in the matter, we are willing to abide for our own opinion, the judgment of every man who reads it, as sanctioned by the Committee in the following Report. In the mean time, a copy of the work shall be sent with pleasure to any one sending a subscriber to the "Plough, the Loom and the Anvil," to 79 Walnut-street, Philadelphia, not as a remuneration in the cost of it, but in its intrinsic value:

REPORT ON F. G. SKINNER'S "ELEMENTS OF AGRICULTURE."

The undersigned committee, to whom was referred "*The Elements of Agriculture for the use of Primary Schools*," respectfully report: That they consider the appearance of such a work as in happy coincidence with the spirit that may be said to characterize this age of improvement. It seems to be admirably fitted, in form and substance, not only to impress on the youthful mind a knowledge of important elementary principles, but to awaken in it a thirst for future knowledge, and a perception that Agriculture is indeed a profession, demanding equally for its success and dignity, a wide range of intellectual inquiry and cultivation.

In the estimation of the committee, it has been well said, in the Report of the Central Committee on Agriculture, in France, that "the teacher may with confidence draw upon its pages for all that seems to be of primary necessity for himself first, and then for the children of adults confided to his care."

In short, your committee have no hesitation in recommending the *Elements of Agriculture*, translated and Americanized by F. G. SKINNER, to be introduced as a common school book, the price of which (but a few cents) bears no proportion to its intrinsic value and importance, while it places it within the reach of all. Your committee would regard its sanction by this Society, as contributing most auspiciously to one of the most important objects to which its attention can be given, to wit: *The cause of improved agricultural education.* They entirely concur with the memorial in this case, that as we would have the tree incline, so we should bend the twig; and that as an *entering*

wedge to a more appropriate system of agricultural education, for the sons of the cultivators of the soil, this is decidedly the best that has fallen under their notice.

All which is respectfully submitted. By order of

W. W. W. BOWIE, Chairman.

[The committee consisted of W. W. W. Bowie, of P. George's; R. M'Henry, of Harford; and A. Kimmel, of Frederick.]

In corroboration of the above Report, might be adduced the opinions of some of *the best* judges—men who have taken the deepest interest in the subject of education in New-York—Delaware—Maryland—Virginia and South-Carolina—men with whom we cordially unite in the belief, that without *more appropriate instruction at school*, the art of agriculture can never be pushed to that degree of improvement of which it is easily susceptible, when it shall come to be generally pursued by men educated *for it!* Some such real benefactors of the cause, have distributed the "Elements of Agriculture" at their own expense, and we understand it has been recommended and adopted by the school Commissioners in Delaware. If the reader should think we dwell on this subject of *agricultural education* too emphatically, we have only to direct his attention to our humble essays on the same subject, for the last thirty years, and he will find the opinion so inveterate, that it may now be pronounced "a disease we shall die on." But mark ye—Education can never become well systematized, general, appropriate and efficient, where people all follow the plough, and where, *therefore*, the tendency must be to *scatter*, instead of coming together and combining. "Where pursuits are various and population thick, men may train all their children to some useful and sustaining industrial occupation—but where all are at the plough, as in some of the States to which I have referred, parents must exhaust their means, in sending their children to distant schools to be boarded and educated, far away from the best of all teachers for health and morals—the sleepless watchfulness of the mother; or they must keep them at home deprived of the best of all earthly blessings,—a good education,—and alas! too often compelled to let them go at last to become their rivals in the far West, instead of remaining to be their safest and best friends and companions in their own neighborhood—for, in such states, practical agriculture, and that not in its highest forms, is the only pursuit with which the rising generations have any chance of becoming at all familiar!"*

The following extract from the Report of the Committee, chaired by that indomitable friend of the cause, Major Jones, of Delaware, on the important subject of "*agricultural productions*," is certainly not indicative of that diffused and general zeal, which is necessary to "advancement in agriculture," and which this patriotic society is so zealously endeavoring to inspire:

"The Committee on agricultural productions beg leave to report, that *no applications* have been made for the very liberal premiums offered by the society."

We cordially unite with our colleague, of the "American Farmer," in the conviction that it may be deemed fortunate for the great ends that spirited association is endeavoring to achieve, that its worthy President was not allowed to resign his post.

"Mr. Calvert, announced his earnest desire of being excused from serving any longer as President—but the Society, by a unanimous voice, and by acclamation, refused to accede to his request. The burst of feeling which flowed towards the President, showed in how strong a manner he had attracted to himself the love and respect of the members. By his guiding care, all were ready to admit, the Association had been placed on the elevated position now held by it; and notwithstanding the reiterated appeals which Mr. C. had made to be relieved from further duty, it was determined that its interests required

* Skinner's address at Boston.

a still heavier sacrifice of his time and attention, before they could be dispensed with. He was literally forced to acquiesce in the decision, and will consequently continue to discharge the duties of the office for another year."

Another, and for a single one, doubtless the most instructive feature of the Exhibition, was the annual ADDRESS by the Hon. WILLOUGHBY NEWTON, thus characterized, very justly we are sure, by the same paper:

"His address was conceived in fine taste, breathed the lofty inspirations of a farmer's and a patriot's heart, and was delivered in the most happy manner. As we shall publish his address in our next number, we shall not forestall public opinion further than to say, it reflected honor alike upon the author, the cause of agriculture, and upon his native State, which may well be proud of such a son. Its teachings are instructive, and we hope will be well studied, in order that they may sink deep into the agricultural mind."

Prevented, unfortunately, from *hearing* it, we shall read it the more attentively, when it appears as promised.

There are, we know, very few practical Farmers, who can so well tell, as can the orator on this occasion, how soon, at what cost and how fruitfully the cheap poor lands of Virginia, can be made to yield remunerating crops; and doubtless he will have told too, why and how it is, that so much of the land of that State, naturally fertile, easily reclaimed, and lying along her navigable waters, *remains so long cheap and exhausted?* and if he has suggested an adequate and practicable remedy, within the general reach, and that will probably lead to general melioration, he will have brought about the great consummation so long sought for, and so devoutly to be wished. It can not, we should suppose, be for *want of knowledge*, for no people in our humble judgment, better understand the means of agricultural improvement than the "general run" of land holders of Maryland and Virginia. In its principles and its practice, none have been better instructed than they, by the Meades, the Pages, the Barbours, the Bartons, the Minors, the Garnetts, the Merriwethers and the Ruffins of the old Dominion; in Maryland, by the Bosleys, the Bowies, the Dorseys, the Goldsboroughs, Stevens, Lloyds, Martins, Emorys, Muses and a host of others, exemplary Farmers, so numerous that their "name is legion." In both States societies have been formed, again and again, for the last thirty or forty years, composed of practical Farmers of surpassing intelligence. At the very LAFAYETTE FAIR to which we have referred, was delivered an Address, by that true patriot, accomplished scholar and high bred gentleman—General ROBERT GOODLOE HARPER, which we have just read again with a degree of admiration not easily to be expressed—one which, if *addresses* would eradicate radical evils, and supply the want of wise legislation, might be stereotyped and profitably repeated for its profound and wholesome suggestions, at every Fair in the land.

Mr. Newton will no doubt have revealed to us, whether the ever widening area of cheap and exhausted land, is owing to want of knowledge—want of industry—want of capital,—or whether it is for want of that all-pervading and sufficient influence which can alone be supplied by a *reasonable certainty of steady adequate return to labor and capital.* He will doubtless have told us, in a word, whether it be possible to keep up, much less steadily augment, the productive power of any country which sends away to other countries its raw materials, to be manufactured and consumed; returning to the land, not even the refuse of its products. He will perhaps have disclosed how, if it be indeed possible (for we confess it is past our comprehension) for a country to improve in its agriculture, thicken its population, augment its wealth, build good roads and bridges, and school houses and churches; who ship away all the produce of their land; buying in distant States and countries, their ploughs, harrows,

coaches, leather, iron, hats, coats, and even their pegged boots and shoes; in the very act of which thousands of carmen and waggoners, ships and sailors, and exchangers are supported at the *expense of the producer or cultivator of the soil!* Should he have told us all this, he will have explained how it has happened, as attested by the venerable JOHN TALIAFERRO, on personal recollection, that the fine old orchards which in his early days abounded in Vinginia, have "grown up in pines." In a word, he will have accounted for the phenomena presented in the following statistics. They are purposely confined to, and embrace, the whole range of tide-water counties, from Alexandria to Norfolk; comprising the congressional District erewhile represented with so much ability, by our friend from whom we confidently anticipate the solution of a state of things, in the contemplation of which, after more than thirty years of anxious labor in the cause of the Farmer and the Planter, it would now be superfluous, at least, not to say absurd, to declare that *we* find anything but pleasure. For ourselves, we believe it to be owing to our subserviency to the "policy of British merchants," so strongly deprecated by General Jackson—to that cunning policy, under the fascinating name of "*free* trade," which has led us within a year, to import, for Virginia and other States, foreign produce (wool, beef, mutton, flour, potatoes, &c.) to the value of 200,000 *tons of British iron!* and so believing, undertaking as we do, to teach the political economy by which agriculture *must* thrive or decline, as well as, and even more especially than the mere details of farming, (which most Farmers understand better than we who undertake to instruct them,) "situated," we say, as we are, and believing as we do, we should esteem it an act of *base treachery not to say so* at whatever sacrifice of the support we might otherwise obtain, from *some who don't like to hear disagreeable truths*, and have yet not the magnanimity to admit their error. But to the

POPULAR STATISTICS OF THE TIDE-WATER COUNTIES OF VIRGINIA, FROM ALEXANDRIA TO NORFOLK—*evincing almost unbroken uniformity of decline for forty years, embraced in that period.*

	In 1790.	1820.	1840.
Fairfax,	14,722	11,404	9,370
Prince William,	11,615	9,419	8,144
Stafford,	9,588	9,517	8,454
K. George's,	7,366	6,116	5,927
Westmoreland,	7,722	6,901	8,019
Northumberland,	9,116	8,116	7,924
Lancaster,	5,638	5,517	4,628
Middlesex,	4,140	4,057	4,392
Matthews,	——	6,920	7,442
Gloucester,	13,498	6,678	10,715.

We cannot dismiss this subject, even for this occasion, without acknowledgment to the committee that brought to public notice the incident so well related in the following, from the committee on Neat Cattle. "In the midst of their duties" they say:

"They came across a little boy 5 years old, from Fairfax county, Va., named Horace Bayley, driving in yoke two beautiful heifer calves, 6 weeks old, which he had himself broken in 3 weeks; he drove them with such accuracy, and they were so perfectly docile and well broken, that forcibly it brought to your committee the recollection of the passage in the Holy Scripture, of the fiercest animal being led by a little child. Your committee without hesitation recommend unanimously to the consideration of the committee on discretionary premiums, to award to this child the *best* premium their duty will allow, and that it be given to *himself;* and would recommend to the notice of the Society this novel sight." JOSIAH W. WARE, Chairman.

Mr. Bailey, the father, is one of those "Yankees," of whom so much has been said, (with some measure of romance, as we apprehend,) who went from New England and settled on, and so soon improved the "poor lands of Fairfax county"—Mr. B., we apprehend, like most of his countrymen, was tempted by the cheapness thereof, and by that land-mongering disposition, which is said to be a Saxon instinct, to buy much more than he could improve. The small portion of 500 acres (we believe) which has been improved, has been dedicated to *milk dairy husbandry*—selling milk at a distance of 8 miles in the Washington market. He has, in a most exemplary manner, reared a very large family in habits of sobriety and industry, lives in a plain comfortable style, with all the industry and thriftiness of his own, and the proverbial hospitality of his adopted State. His sons are reared as well in the love of knowledge and the emulation of moral excellence as in habits of industry and personal independence and God send honor and success say we, *to all such aims and efforts.*

The whole subject is a fruitful one, going down to the lowest roots of agricultural inquiry, and therefore, in some shape, or under some head to be again and again discussed in this journal; until he who runs, shall be able to read, why and wherefore it is that our people are constantly dispersing and opening new lands instead of combining and improving the old and exhausted ones.

PROSPECTS OF THE FARMERS.—We invite the attention of our farming readers to the following statement of their prospects, which we take from the Liverpool *Shipping and Mercantile Gazette.* With *a short crop*, the prices cannot, we are told, exceed 45s. a quarter, or $10 80 for 8 bushels weighing 70 lbs. per bushel. What then are our prospects for supplying the "great grain market of the world?" Is it not better that we should determine to make our own the great market? It surely is so, and the day is not far distant when the farmer will see, aye, and *feel*, that the time has come for so doing:

"Harvest having been some time completed, and the time having scarcely yet arrived for preparing the land for autumn sowing, farmers have at present comparatively little out-door work to attend to, and they have consequently (as is usually the case at this period of the year) threshed rather freely. The more that the crop is tested by this proof, the greater do the complaints become respecting the deficiency of grain in proportion to the straw; and it is too certain, that the produce of wheat will fall materially short of what is considered a fair yield in average seasons. Present prices cannot, therefore, pay our growers; but there is so little to hope for in regard to the future, and the pecuniary position of the smaller class of farmers has, during the last two years altered so much for the worse, owing to undue foreign competition, as to render it more than probable that they will supply the markets freely until such time as they shall be obliged to direct their attention to ploughing and getting in their autumn crops.

"At most of the markets in the agricultural districts, wheat has been brought forward in sufficient quantities to check the tendency to advance, which prices exhibited earlier in the month, and in partial instances a reaction of about 1s. per qr. has taken place. The trade has also become slow at many of the large consuming towns, and at those places where, in addition to the home supply, good arrivals have been received from abroad, the turn has been decidedly in favor of the buyer. We are inclined to adhere to the opinion which we have on former occasions expressed, that at about present rates we shall continue to have large imports, and that, with free trade, the average price for the kingdom is not likely to range much over 45s. per qr. *even in years like the present, when the crop is below an average, and when such terms cannot remunerate the grower.* With the exception of Danzic, where some quantity of old wheat remains on hand, the stocks are small at the principal Baltic ports, and supplies of new having commenced to come forward, the exports from that quarter may, perhaps, not be large if Winter should set in early.

"From France, shipments of wheat and flour have been resumed, and will probably continue to be made regularly, so long as there is the slightest chance of profit on consignment in the English market."

FIELD. DEL.
JOHNSON & FRYER, LITH.

THE PROPER SHAPE AND QUALITIES FOR A BULL.

SUPPOSING the excellence of imported breeds of cattle to be established, as it is reasonable to suppose it is, after so many years of attention to it, in a country where great means, much experience and sharp rivalry have existed so long, still it must be a very long time before these improved breeds will fall within the reach of farmers generally. In fact, these distinct breeds have each its peculiarity, adapted to particular circumstances, better than any common breed, for a particular object. If therefore, the breeder of cattle resides where circumstances warrant him, in going for that particular object, he will, of course, seek to possess himself of a stock most likely to secure it in the shortest time; but the fact is, that our farmers generally wish to combine several purposes, for *all* of which, no one of the improved breeds is eminently suited; and perhaps the best of our own breed *combine* as many advantages as any *one* of the foreign, if not more. At all events, there are certain points *essential to the excellence of all bulls*, and which may be found to characterize the best individuals of any breed—our country breed included—and which the breeder should always endeavor to realize. That form has been thus described:

"The head of the bull should be rather long, the muzzle fine; his eyes lively and prominent, his ears long and thin, his horns wide, his neck rising with a gentle curve from the shoulders, and small and fine where it joins the head; his shoulders moderately broad at the top, joining full to his chine; his bosom open, breast broad and projecting well before his legs; his arms or fore-thighs muscular and tapering to the knee; his legs straight, clean, and very fine bone; his chine and chest so full as to leave no hollowness behind the shoulders;* the ribs bowing, to keep his belly from sinking below the level of his breast; his back or loin, broad, straight, and flat; his ribs rising one above another in such a manner that the last rib shall be rather the highest, leaving only a small space to the hips or huckles, the whole forming a round or barrel-like carcass; his hips should be wide-placed, round, globular, and a little higher than the back; the quarters, from the hip to the rump, long, and instead of being square as recommended by some, they should taper gradually from the hips backwards, and the turls or pot bones not in the least protuberant; rump close to the tail; the tail broad, well-haired, and set on so high as to be in the same horizontal line with his back.

A bull is in possession of his generative powers and is competent to be used with two-year-old heifers, at fifteen months; but it is not advisable to permit him to co-habit with large cows, until he is arrived at greater age. It is proved by practice that the produce of a bull of fifteen months is equally stout and healthy as that produced from a bull of a greater age. To a young bull we would not advise more than ten or twelve heifers; but the numbers may be increased till he is four years old, at which age the bull may be considered in possession of his greatest powers. The cow and ox attain their full growth at seven years. Bulls when let loose with cows, are very much in the habit of not confining themselves to those allotted to their charge, but roam away and visit others; to prevent this, they are by some breeders tied up in a pen or stall, and fed during the summer on cut grass, clover, or any other green food, and in winter on hay. When required they are let out to the cows.† Others let them run with the cows

* Without saying any thing about it, as it was not our business, we have observed this to be a common defect in showy and much-vaunted bulls at some of our cattle shows.

† For greater convenience and perfect command, a ring should be put in the nose of every young bull. The annexed figures show the form of it.

Fig. 372.

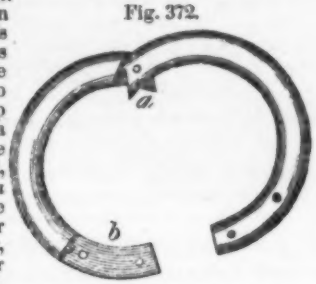


Fig. 373.

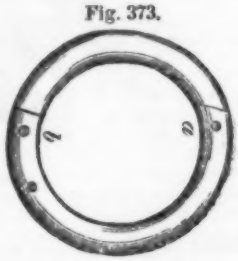


Fig. 372 represents the ring in an open state, ready to be inserted into the bull's nose, the joint *a* allowing the two sides of the ring to open as wide as that the end *b* may be inserted into the hole, to be burned or otherwise made with a sharp pointed instrument, in the form of a cocker's gaff, through the septum of the nose. Fig. 373 shows the ring closed, after it has been fastened into the nose, *a* being the joint, and *b* the two ends of the ring, lapped over and secured together by two countersunk screws. This ring, which would give a child command over a Leviathan, is formed of ¼ inch rod-iron, and its diameter over all is 2½ inches, and it should be highly finished.

throughout the year, and some work them with the oxen, but the latter is by no means recommended, as the bulls are generally vicious with oxen, and often do mischief by goring them. The working of a well-trained bull, however, may be found advantageous on a small farm, where his labor is of consideration."

The Bull of which we here give a portrait is the DUKE OF CAMBRIDGE, bred by the late Thomas Bates of Kirkleavington, England. He is now the property of M. Sherwood and A. Stevens, and won the first prize for bulls in aged class of short horns, at Syracuse in 1849.

To these gentlemen, as since to Mr. Morris, and previously to Mr. Vail, of Troy, the public is indebted for a fair supply of the blood of this celebrated "Bates" stock of Short Horns, and there can be none better.

Quite as good (some of them) were sent many years ago, to the editor of the "Plough, the Loom, and the Anvil," into Maryland, by the late Charles Champion, of Nottingham, England; and under an order by the same person, to the late venerable and deservedly beloved Gen. Van Rensellear.

On the appearance of Champion, Shepardess, and White Rose at the Maryland Cattle Show, so strong was the admiration they excited, and the surprise at the perfection of their symmetry, beyond anything we had previously seen, that Governor Lloyd (not previously a believer) promptly paid $1500 for the three, and afterwards said he considered himself well paid by the use of the bull for one season, in crossing his numerous herds on his several estates on the eastern shore of Maryland; and on the spot, the late George Calvert of Riversdale, father of the present President of the Maryland State Agricultural Society, a good judge, offered a resolution which was unanimously adopted, to present Mr. Skinner with pieces of plate for each animal, which was done, with emblematic devices; for the services he had rendered to the state by their introduction, he never himself having seen the pure blood, and having then no use for them but to present, to the view of Maryland farmers, the *reality* of what he had read much about and believed in. The funds for the importation were liberally supplied by the late Robert Oliver, and amounted to about the price paid to him as above by Col. Lloyd. Such is a brief history of that importation into Maryland.

A better bull than Champion, or a better heifer than White Rose we have never seen, unless it were *Marion*, selected from the herd of the late Earl Spencer, and imported by the late Thomas Oliver. His superior, according to our poor judgment, we have never met with. The first calf of White Rose was Wye Comet, sold, we believe, to Col. J. H. Powel, for $500. That such prices are not to be had now is owing to—what?

PERSONS desirous to have the best information extant on any particular branch of husbandry, adapted to the United States, will please intimate their wishes to the editor of the "Plough, the Loom and the Anvil." His resources enable him to supply the best and most recent discoveries and experience.

Few, probably, are aware of the amount which may be added to the wealth of a country by the use of a single Bull of improved breed, supposing his blood to add the value of a single dollar to the produce that spring from his loins within the term of his life-time, and without taking into account the offspring on the female side. It is said that 150 cows have been frequently served by one Bull within a season. But allow him 110 cows in the season, and deducting 9 per cent. for accidents, 100 calves would annually be produced from the use of him; and allowing his male calves to beget 20 calves each, in the term between the age of 15 and 27 months, and 100 calves every year thereafter, the extraordinary number of 9,870,000 will have been produced by the time the original Bull, the root of all, has reached the age of twelve years, which estimating at $1 more in value than the common cattle of the country, would make the enormous sum of $9,870,000 gain to the community! But putting it at one-half, or one-fourth, and who can compute the additional wealth that has accrued from the importation of short horns many years since into Kentucky by Sanders and Teagarden, and by Mr. Clay; by the Ohio Company, (with a history of which he had hoped to be supplied by Colonel Taylor, M. C. from that state;) and from the importations of the Patterson Devons into Maryland; and the importations long previous to that by Patterson and O'Donnel; by the Trustees of the Massachusetts Agricultural Societies of Devons and Ayrshires, &c., and previous importations by Mr. Cushing, near Boston, without regard to cost, and whose blood was scattered gratuitously over the country. But the benefactors most likely to be popular and longest remembered are those who scatter most of *human blood!* Such is the way of the world.

HOW TO DEPRIVE THE FARMER OF A MARKET ON THE LAND FOR THE PRODUCTS OF THE LAND.—IRON FOR THE BALTIMORE AND OHIO RAILROAD.

It is proper the Stockholders should be apprized, that since the date of the last Annual Report, the negotiations which were then pending, for the supply of 22,000 tons of iron required for the entire road between Cumberland and Wheeling, terminated in a contract with Messrs. Thompson & Foreman of London. This large contract was accomplished mainly through the instrumentality of Messrs. Baring, Brothers & Company, and by the aid of their guarantee of the Company's Bonds, to the extent of the purchase, say $566,666 67. These Bonds with the endorsement of the Messrs. Baring have been sold in the foreign market at rates varying from 105 to 108 per cent.

The amount of iron already delivered under the contract, at the Company's wharves at Locust Point, exceeds 17,000 tons; and active efforts are being made to close the order with as little delay as practicable, so as to avoid the contingency of an advance in the existing rates of the tariff.

The Board take this occasion to acknowledge their obligation to Messrs. Baring, Brothers & Company, for their zeal and promptness in bringing about an arrangement so advantageous in all respects. The average cost of the rails when delivered will be about $40 per ton, including a commission of 2½ per cent. The iron has been manufactured with the greatest care: and it is believed will compare favorably with any that has heretofore reached this market.

We take the above from the last report of the Baltimore and Ohio Railroad Company, and offer it as a specimen of the almost hundreds of similar statements presented to us by the newspapers of the day, and we beg to call to it the special attention of our Maryland and Virginia readers. Cumberland and Richmond, and their vicinities, abound in iron ore, and in fuel, needing labor only to give them value. Labor requires food, of which the farmers of Maryland and Virginia have a large surplus, for which they need a market, and they require clothing, the materials of which abound, or might abound, on the farms and plantations of those states, and those of the west and south; and yet we are here seen to be importing, for this single road, *five hundred and fifty-six thousand dollars worth of food and clothing* in the form of iron! while the mines, and furnaces, and rolling mills of the Union, which were everywhere giving life to agriculture, are being closed, and the men who worked in them condemned to idleness, if they do not desire to seek the west, *there to become rivals, instead of customers, to the farmer.*

We entreat our southern friends to mark the fact that the men who make this iron for them, consume at this time scarcely even a mouthful of American food, and are so poor that they can purchase but little clothing, and are consequently very poor customers to either farmer or planter; while the men who, for years previous, wrought in our own mines, and furnaces, and mills, *ate no food but that which was raised within the Union,* and being able to clothe themselves as became freemen to be clothed, were consequently large customers to both farmer and planter.

We are told that this iron is cheap, but why is it that England now sells us cheap iron? It is, because of our own great capacity for producing iron and maintaining competition with her. In 1842, the total product of the Union scarcely exceed 200,000 tons. Five years after, under the benign influence of the tariff of 1842, it had reached the extraordinary extent of 800,000 tons, and would ere this time, have reached a million and a half, making a market for seventy millions of dollars of the products of the earth, for from the earth comes every thing that enters into the making of iron, the food, the clothing, the house room, and the kitchen utensils, both of which latter are merely the representatives of the food and clothing of the men employed in production. *Free* trade has already closed hundreds of the furnaces that produced that iron, and

it is about to close many more. It has ruined many of their owners, and it will ruin many more. It has driven tens of thousands of those who worked in them to employ themselves in the work of producing food for themselves, and it will drive many more. It has already closed a large market for the produce of the farms and the plantations of the Union, and in a little while much of that which yet remains will be closed and we shall then be dependent on England for a market in which *to sell* our food and *to buy* our iron; and then, unless we greatly err, instead of dear food and cheap iron, our farmers will have to mourn the result of their own insanity, which will be expressed in the few brief words, CHEAP FOOD, and HIGH PRICED IRON. Let them awake to the fact, that this is now in preparation for them, and that its occurrence is as certain as that light will accompany the rising of the sun.

LOSS OF CAPITAL FROM WANT OF CONCENTRATION.

WE copy the following statement of the enormous devastation from a single crevasse below New Orleans, chiefly with a view to call the attention of our planting readers to the fact, that labor and capital are *driven* into the cultivation of sugar by the want of a market for cotton, which market would long since have been made to the full extent of their ability to supply it, had they co-operated with the North in the effort to make a market on the land for all the products of the land. The world has never witnessed (except in case of war) so extraordinary a waste of labor and capital by an independent nation, as that which has gone on, and is now going on, within the limits of this Union, from our refusing to adopt a policy which would induce the now almost pauper laborers of Europe, to come here and engage themselves in the development of our own resources, thereby to become the best of customers to American Farmers and Planters.

"This crevasse occurred on the 7th of April, 1849. The levee through which it broke was only 4 feet high, but such was the inefficiency of the means used to close it, that in about 20 days it was abandoned as impracticable. At this time the breach was only 300 feet wide, and at first the waters were discharged into Lake Catahouatche, and thence over the large interior Lakes and Prairies. From the peninsular character of the country, however, between the high grounds fronting on the river and those on Bayou Lafourche, the waters accumulated upon the interior area to the depth of four feet, submerging the rear of all the plantations not protected by swamp levees, and destroying a large portion of their growing crops. Some well informed planters estimated the loss to be upwards of 10,000 hhds., but others have even advanced on these figures. 'Young plant cane' was killed by hundreds of acres, fences torn away, the plantation cattle driven off to a distance which prevented even inquiry as to where they were, and the comfort and prosperity of scores of plantations utterly destroyed or injured for an entire year. At a distance of forty miles below New Orleans, the water stood against the rear levees of plantations near three feet above the 'swamp level.' The lands continued submerged until about the 15th of September, though the water had fallen some three feet by the 25th of July, the widening and deeping of the mouth of the crevasse by abrasion seeming to keep up its capacity to discharge its accustomed volume.

"We visited in person the crevasse, about four days after it broke through, and at a time when it could have been stopped at an outlay of $3000. The indifference of the authorities of the Parish allowed it to cost the planters over *half a million dollars*, and then compelled the proprietor to build a new and expensive levee through his best sugar fields. The area submerged by this crevasse is estimated at 850 square miles, or 544,000 acres."

RANDALL'S unrivalled work on Sheep Husbandry, will be sent to any one sending $5 for two subscribers, or for two years' subscription to the "Plough, the Loom and the Anvil."

GAME—WHAT CONSTITUES GAME—LAND-ANIMALS AND BIRDS, WITH SOMETHING ABOUT THEIR NATURE AND HABITS.

In England, the word *game* includes the hare, the pheasant, partridge, (our pheasant,) quail, (our partridge,) heath fowl (black grouse) and moor-game, (red grouse,) snipes, wood-cocks and rabbits. These last three were only made *game* if killed by the gun, but not if taken by nets or springes. Deer are also considered game, and by some ancient statutes the heron, mallard, duck, teal, &c. were included, but are not so considered at present.

We shall not give what is said by approved authors about any except such as are common to our country, adding such as are peculiar to us, as the buffalo, racoon, canvass-back duck, &c.

If any ask, why treat of such matters in an agricultural journal, the answer is, that we trust our readers desire to have, for their sons, if not for themselves, a general knowledge of things so emphatically belonging to rural life.

We begin with the

GENERAL DESCRIPTION OF GAME, THEIR HABITS AND ECONOMY.

The hare is one of the most timid animals in nature; fearful of every danger and attentive to every alarm, it is continually upon the watch, and, being provided with very long ears, which are moveable at pleasure, and easily directed to any quarter, it is warned of the distant approach of its enemies. These, when pursued, are its constant and unerring instructors. The sense of hearing, so acutely alive to any noise from behind, enables her to avoid so frequently the throw of the greyhound, and, when hunted, to continue her course till quite clear from the clamor of the dogs: and when the ears are brought forward or sideways, her hearing is very imperfect. Deaf to the voice of her foes in front, she has been frequently known to run against objects, and hence the vulgar notion of the hare running herself blind. This, however, is in part attributed to the deficiency of her sight when directed straightforward. Whether the eyes of the animal receive any inconvenience from being so large and convex, or that they suffer damage by being exposed to dust and prickles from the lids not covering them completely, has not been determined, but it is certain that they do not see so perfectly before as sideways or aslant. The hare, so destitute of the means of defence, has been provided by nature with the powers of evasion to a surprising degree; every part and member of this animal seems to be formed for celerity, and it is consequently one of the swiftest quadrupeds in the world. Its hind legs are much longer than its fore, and being furnished with strong muscles, give it a singular advantage in running up a hill; and of this it appears very sensible, as it is generally observed to fly towards rising ground when first started. The color of this animal is another great means of its preservation, as it often so much resembles the ground upon which it sits as not to be easily distinguished. In cold countries, near the pole, where the ground is covered with snow, the greater part of the year, the hare becomes white, and is thereby rendered less conspicuous in these frigid regions. Thus formed for escape, it might be supposed the hare would enjoy a state of tolerable security; but. though harmless and inoffensive, it has but very few riends. Dogs of all kinds, as if by instinct, pursue it; foxes, weasels, wild cats, and birds of prey, are its most dangerous enemies; and man, more powerful than all, makes use of every artifice to obtain a creature which constitutes one of the numerous delicacies of the table.

According to naturalists, the hare lives six or seven years, and attains its growth in one; though there is much reason to believe, that, if undisturbed, it would live much longer than this period. It engenders frequently before it is a year old. The buck seeks the doe principally from the month of January to the month of April. The female goes with young, thirty or thirty-one days, and brings forth generally two young ones (though they have been known to produce three or four), and deposits them in a tuft of grass, or in a little bush, without any apparent preparation.

The sportsman may know the male and female by the following distinctions:—the head of the male is short and round, the whiskers long, the shoulders more ruddy, and the ears shorter and broader than those of the female, whose head, on the contrary, is long and narrow, the ears long, and sharp at the tip, the fur on the back of a grey color,

inclining to black, and, in point of size, she is frequently found smaller than the male. There is, also, considerable difference in the feet. In the male the feet are small and pointed, and the nails short; whereas they are much longer and more extended in the female.

A young hare, that has attained the full growth, may be known from an old one by feeling the knee joints of the fore legs with the thumb nail. When the hare is old, the heads of the two bones which form the joint are so close that little or no space is to be perceived between them; on the contrary, when it is young, there is a perceptible separation.

Hares are said to foresee the changes of the weather, and to seat themselves accordingly. Hare-finders are partly directed in their search by the wind. Hares, however, seldom sit in the middle of a field, but at no great distance from the hedge which surrounds it. Shepherds on the downs assert that they have a variety of seats, which the weather induces them to change from time to time, and return to again; and the more rain that falls, the nearer to the top of the hills will the hares seat themselves.

We have several recorded instances of the susceptibility of the hare for education, such as dancing to measure, beating a drum, &c. They have also been frequently rendered so familiar as to feed from the hand, lie under the chair, or before the parlor-fire, and appear altogether as easy and comfortable as a lap-dog. Cowper brought up three young leverets, which he named Puss, Tiny, and Bess. These he kept a long time, and when tame and familiar they became a source of amusement to the poet.

The chase of the hare affords excellent diversion to the sportsman, showing at times a great deal of cunning and dexterity in avoiding the hounds; amongst the many shifts of the hare the following is remarkable:—A hare that is run during or immediately after the rain, will not take to the woods, on account of the wet which hangs on the boughs, but will often squat at the edge of a cover; and as soon as the hounds have overrun the scent, return to her seat; and unless the huntsman be at some distance behind to perceive the manœuvre, she, by this means, often escapes. Of all cases none affords so much pleasure to the pedestrian as the pursuit of the hare, as these animals run in circles, and generally return to their own ground, by which means foot-people are enabled for the most part to keep sight of the hounds; it is, in fact, charming diversion: the clanging horns, the halooing of the huntsmen, and the sweet-sounding notes of the pack, seem, as Somerville has beautifully describes, to

> 'Waft the floating joy
> Through all the regions near; afflictive birch
> No more the school-boy dreads: his prison broke,
> Scampering he flies, nor hears his master's call;
> The weary traveller forgets his road,
> And climbs the adjacent hill; the ploughman leaves
> The unfinished furrow; nor his bleating flocks
> Are now the shepherd's joy! Men, boys, and girls
> Desert the unpeopled village; and wild crowds
> Spread o'er the plain, by the sweet phrensy seized.'"

HORTICULTURAL MEMORANDA—FOR DECEMBER.

FOR THE "PLOUGH, THE LOOM AND THE ANVIL."

WINTER with all its stern features approaches the Gardener and Horticulturist; whether prepared or unprepared, the results will tell. Premising that *all crops are protected*, and *all vacant ground turned over*, let us give a thought to the wants of the future. First of all, look well to the *Manure and Compost heaps*. Collect together every available material, and turn over the varied portions, that the whole may become a uniform mass: which defend from deluges of rain or floods of water. Look to your root heaps and root cellars, particularly Potatoes. If the *rot* appears, it will assuredly be stayed by turning over the tubes, selecting out the unsound. Take one bushel of air slacked lime, two bushels of charcoal dust, mix them together and sprinkle the mixture very evenly amongst the sound roots. This will stay the progress of the disease amongst 80 to 100 bushels of Potatoes; at least it has done it with us, and had we not resorted to it, we feel assured our winter supply had been lost.

The season also brings with it many enquiries and reflections, about the best method of laying out a *Lawn* of 50 feet or 50 acres. Should a tree be placed here, or a plant there? Should we have a pond or a rook-

ery? Should we have curved lines or straight ones? Should we adopt the clumping, interspersing, or solitary system? A thousand such questions arise, all put in vain to those who are not on the spot to advise; and to those who are too listless to think, or too uninformed to judge, we will point out a few of the incongruities that *are* seen, and that too where available sources were in profusion; but *cheap* labor and a want of thought *pied* the whole. It takes strong nerves to see a Cedar of Lebanon planted under the shade of a Weeping-willow; and the giant Norway Spruce nodding to Pinus pigmya; a Balm of Gilead under the drip of a spreading Oak; the magnificent excelsian Pine that would require nearly a fourth of an acre, *stuck* in a corner of three feet, where there was a beautiful lawn of nearly five acres; or behold a College that is endowed with millions, covering its grounds with *cheap* Maple by the hundred, *all of one sort*, and a few other kindred trees that fill the eye, and absorb the overgrown rubbish of some interested friend. Those corporations should pride in the sources of the arboretum of our country, as much as in the profundity of their Professors or the extent of their Libraries.

There is no country in the world that can produce the fertile scenery that we can. The foliage of our native forests combined with those of hardy foreign growth, disposed by the hand of any one who has sound reflection and a cultivated studious eye, can produce an outline and a picture that has never entered the imagination of our best landscape painters; behold the golden foliage of the Poplar with the garnet splendor of the Gum tree, in the months of September and October! The Weeping Willow backed by the towering Lombardy!—the flowing Dogwood in juxtaposition with the purple leaved Beech!—the Norway Spruce and the Panlownia, both branching from the ground upward! Such arborical associations combine the scenery of Lapland with that of the Tropics. We cry vengeance on the knife that lops the branches of the two last named trees.

To produce strong and striking effects in a scenery, there must not only be a tolerably extensive variety of trees, but there must be groups of particular kinds, in prominent places, with broader masses of varied form and color. *Observe—two* trees can never form *a group.* It requires three or more, to have a natural appearance. How often we have seen much labor spent in destroying the beautiful natural undulations of the lawn or pleasure ground, converting it into a tame level! How often is the valuable tree planted into the unnatural soil, without preparation or fixture, and left to struggle against ungenerous improvident liberality. The first object of consideration is what results are required? Next examine the soil—then view the objects in the distance and those in the immediate vicinity—these being carefully deliberated upon, the next important step is, the trees and plants. View their ultimate growth *not their present size.* Avoid crowding together; if you have him not, procure a good workman, careful and expert. Such is better worth two dollars a day, than an ordinary one is worth fifty cents. Another *vital* consideration is the formation of the head of the tree. In lawns, where the grass is to be regularly mown, we say make them branch as nearly from the ground as possible; where it is to be pastured, the heads must be as high as to prevent the branches being brouzed by the cattle—use the knife freely, and cut the branches close into the preceding year's growth —thin out where they are too thick—raise the earth high round the stem which will partially support the tree.

Where trees are to be brought from the woods, they should all be

prepared a season previous, by digging a trench round their roots from 2 to 5 feet from the main stem; fill it up again when the prong roots will freely fibre into the new soil, and the trees can be removed with perfect safety, six months after the operation. In removal of forest trees, they should be from situations as fully exposed as possible, and keep the tree to the same point of the compass after removal, as it stood before. If these few hints be fully carried out, pleasure and success will crown the effort.

BUIST.

THE PRICES OF COUNTRY PRODUCE.

OUR intention is, as soon as we can make the requisite arrangements, to give the New York prices current for the great leading staples of the country, such as cotton, corn, wheat, rye, oats, hemp, flax, tobacco, beef, pork, cheese, butter, wool, and iron, and will add to these as may be suggested, other articles if not of too much local interest as to forbid their introduction into a work like this.

We hope to arrange satisfactorily for this object in time for the January number. True, we might select these prices from the mercantile papers of that city, but they go into much more minute and extensive detail than would be necessary or proper for us. Our duty dictates the reservation of all the space we can command to the *two great objects of this work*, to wit:

1. Showing the farmer and planter by the transactions and incidents of daily occurrence around them, how much they are suffering by a policy that *separates consumers from producers*, and—

2. What is transpiring or practicable to increase (not to diminish) the actual *products of their labor and capital.*

We have said the *New York* prices because, as we cannot give the prices every where, and as this journal spreads with remarkable uniformity over the whole country, it is deemed best to give a view of the market which, more than any other, indicates the value of things in other places. In these monthly reports we shall endeavor to keep the reader advised too, of the state of foreign markets, especially in the "great workshop of the world," to which we shall go and ask them to buy, and what they will please to give for our greatly redundant supplies, until steady protection shall have enabled us to force the foreigner to come and *ask us* what we will *take* for the *residuum* of what we make.

The reader will observe, however, that there is a great difficulty in making up a general report as to the state of the crops and supplies, on account of the *vast extent of our country.* In England, not so large as some of our single states, the case is very different. At all events, we shall endeavor to make this department of the P., the L. and the A. fully recompensing to the reader for the space (one or two pages) that it must occupy.

For the present we can only give the following items, derived from much more extensive reports, in the last "New York Dry Goods Reporter."

COTTON. Nov. 22. At the commencement of this week there was a more active demand, principally for the home market. Manufacturers buying sparingly, and few laying in winter supplies. Stock on hand and on ship board 22,000 bales. Decrease in receipts so far, as compared with last year, 17,000. The sales to-day 4,000 bales at ⅛ to ¼ of a cent off, under the effect of news by the Niagara. On the 9th Nov. sales amounted to 2500 for the week. Fair Orleans was quoted at 8d.; Upland 7⅝. Stock on hand at Liverpool 447,500 bales, against 701,900 bales same time last year.

GRAIN. Wheat—Genesee white per bush.,	$1,15	to	$1,20
Canada in bond	1,04	"	1,08
Red wheat and mixed white	90	"	1,05
Southern wheat	90	"	1,00
Rye—Northern	82	"	84
Corn—Northern	70	"	71
Southern yellow	70	"	71
Oats—Northern	44	"	45

COAL.—Duty 30 per cent. *ad val.* Foreign is plenty, and in moderate request, and prices of this description lower; the sales post up 450 tons Scotch Steam on terms not public; 1000 Liverpool Orrel at $7,50 a $8; two cargoes of Picton, $5, 37½, four of Sydney, $5 a $5,25, 4 and 6 months, Anthracite has advanced to $7, in consequence of the high rate of freight betwern Philadelphia and here.

Liverpool Orrel	per chaldron	8 — a 8 25
Scotch	"	— — a —
Newcastle, Coarse	"	— — a —
Sydney and Pieton	"	5 50 a —
Anthracite	per 2000 lbs.	6 — a 6 50

IRON.—Duty 30 per cent. *ad val.* Scotch Pig Iron is in fair demand, with sales of 1500 tons at $19.37½ a $20, cash, and $20,25, 6 mos.; 400 tons English Bars at $35 a 36; 200 tons Swedish Steel Iron $81 a $82,50, 6 months.

Pig, Scotch, per ton	19 25 a 20 50
Bar, English refined	50 — a — —
" " common	36 — a — —
Sheets "	— 3½a — —
Swedish	81 — a 81 50
English Hoop	4 — a 5 —

DOMESTIC WOOL MARKET.

New York, Nov. 22. 1850.

The state of feeling previously noticed continues, with sales of 60 a 75,000 lbs. at previous quotations. From undoubted sources, we learn that there is now on hand and expected, large quantities of Foreign Clothing Wools. Mannfacturers must try to use some portion of it in their production, else there will be no chance of the native material remaining within 10 per cent. of present price.

Our Dry Goods Report shows a more buoyant feeling in the Goods market, though no sales of consequence have been made, still the better feeling is a long stride forward.

Next week the clothiers will begin to come in for Spring material, when we hope to be able to report a permanent advance in the price of fabrics. Should these anticipations not be realized, and the Wool market remain as high as at present, there must be trouble among manufacturers. We quote:

American Saxony fleece,	43 a 45
Full blooded Merino,	39 a 41
¼ and ¾ Merino	35 a 39
Native and ¼ Merino	30 a 34
Super pulled Country	35 a 37
No. 1 pulled do.	32 a 33
Super pulled City	37½a —
No. 1 pulled Lambs	33 a —

We hope for decided improvement in this work; we give it our attention *heartily*, and all we ask is that an effort be now made by its patrons to put it on impregnable ground. ***Now is the accepted time.***

☞ We had given out a capital article on the *diseases of dogs*, but want of space compelled its postponement along with other good things, although we have gratuitously enlarged this number by ten pages. If our friends were as anxious to encourage our journal by extending its circulation, as we to make it worthy of that much kindness, we should be perfectly content. While many take and pay for five copies, others take one with apparent reluctance, and sometimes—*forget to pay for that!*

☞ *De minimis non curat lex*, says the law maxim, but there are small things which magnify under Editorial optics—and such is the compositor's omission of the word *let* in the quotation from Proverbs—page 355. It should be

["Give her the fruit of her hands, and *let* her own works praise her in the gates."]

☞ A friend in Mobile, wishes to know where, and at what prices he can obtain 10 or 15 bucks of *best description* of merino, with 20 or 25 ewes—"such," he says, as "*Mr. Randall's admirable work describes.*" His letter, with comments, was given to the printer, but there was not room, although we have enlarged this copy by ten pages. Alabama has all the facilities and inducements for manufactories—coal—wool—iron—water-power—she only wants steady protection to American labor. More in our next.

READINGS FOR MOTHERS AND CHILDREN,

MORAL, ENTERTAINING, OR INDUSTRIAL.

QUITE sure are we, that some of our readers will be puzzled to know the reasons for an arrangement under which some of the items that will appear here, are placed in this Department—whether he, or we should say she, shall think them misplaced or not, will depend in a good measure on her locality. For we profess to have extensively enough, and carefully enough noted such things to have observed, that very different habits prevail, as to the housewife's cares and duties, in different parts of the country. In few things in fact, do these habits differ more than in the duties devolved, we might sometimes say, imposed, on the females of the household. We may mention in illustration of it, but not as a case of imposition where it occurred—that in conversing once with a highly respectable and very intelligent president of an agricultural society in New-York, on his field and his domestic management, to give us a better idea of the age and capabilities of his only daughter then absent, and of the advanced state of her household education, he remarked emphatically—"*she begins to bake!*" And yet in that very locality, the good woman of the house, would be exempt from some of the offices and cares devolved on the housewife in some other States.

The imposition of labors and duties, not properly within her sphere, which *sometimes* takes place, would not be quite so bad if accompanied with all the requisite helps and facilities. But if as often happens, the wife is to have the superintendence of the fruit department, the garden, the dairy, the meat-house, the poultry-yard, the soap-making, the candle-dipping, the knitting, the weaving, the cutting out, and the making up, besides the "cooking for all hands," and the whole care and education of the young children in the bargain; then in the name of justice and common decency let the husband see that she is supplied, to the full of his ability, with the requisite assistance in the way of appropriate labor, good utensils, abundant, and proper food for cows and poultry, and though last, by *no means the least*, with suitable books and competent teachers. Most emphatically should every mother insist on a choice supply of suitable books, fitted

"To wake the genius and to mend the heart."

for, be it ever borne in mind, that it is only, or very rarely, except in early youth, that is acquired that taste for reading, which above all things is to be coveted for our children.

Apropos to this opinion we have so often expressed, but not half so well, we may quote a passage from a little railroad-companion of a book, that is one which you may take from your pocket, or lay aside and take it up again, as you may happen to be in the mood, (or likely to be bored by some stupid *companion de voyage*) with assurance of something on every page, a pun or a sentiment to amuse or instruct you.

The little book to which we are alluding, is one of 200 pages, appropriately entitled "THE COMPANION," OR AFTER-DINNER TABLE-TALK," just laid upon his counter by that discreet and judicious publisher of good things, GEORGE P. PUTNAM, 155 Broadway, New-York.

As to the value of a taste for literature, which, as we have said, is in 19 cases out of 20, only to be imbibed when young, Sir John Herbert writes, and we heartily unite with him:

"Were I to pray for a taste which should stand me instead under every variety of circumstances, and be a source of happiness and cheerfulness to me during life, and a shield against its ills, however things might go amiss, and the world frown upon me, would be a taste for reading. Give a man this taste and the means of gratifying it, and you can hardly fail of making him a happy man; unless, indeed, you put into his head a most perverse selection of books. You place him in contact with the best society in every period of history, with the wisest, the wittiest, the tenderest, the bravest, and the purest characters, who have adorned humanity. You make him a denizen of all nations, a cotemporary of all ages. The world has been created for him."

We have marked many passages and shall continue as we can snatch time for reading, to note things suitable for this department. In fact, if we would follow our inclination, we would *publish a weekly* under this very head; but we have always so much to say to the sterner sex, more than they will profit of, we fear, that there is not room to do justice to the claims of those who are ever uppermost in the esteem of every man of proper feeling. Turning to the same little volume, we take the following remarks, by the Rev. SIDNEY SMITH, on

THE INDESTRUCTIBILITY OF ENJOYMENT.

"Mankind are always happier for having been happy; so, that, if you make them happy now, you make them happy twenty years hence, by the memory of it. A childhood passed with a due mixture of rational indulgence, under fond and wise parents, diffuses over the whole life a feel-

ing of calm pleasure; and, in extreme old age, is the very last remembrance which time can erase from the mind of man. No enjoyment, however inconsiderable, is confined to the present moment. A man is the happier for life from having made once an agreeable tour, or lived for any length of time with pleasant people, or enjoyed any considerable interval of innocent pleasure; which contributes to render old men so inattentive to the scenes before them, and carries them back to a world that is past, and to scenes never to be renewed again!!"

Ah! how true, does not every one of us, boys "raised" in the country, feel all this to be! and, therefore, how incumbent on parents to afford to their children all the innocent pleasures they can do, consistently with their preparation for the great responsibilities of the present and the future.

For what consideration, would any of us relinquish the faculty of looking back on his youthful pastimes, and even its little cares and vexations? on the rapture he felt, for instance, on going after a slight fall of snow, and finding his trap all alive with innocent and deceived, and beautiful partridges! or going at the earliest dawn, and finding the poor nimble-footed hare, suspended off the ground, in his deadly snare, so cunningly "set," with the quarter of a hard red apple, the previous nightfall? or at seeing the lively and chattering squirrel, at the crack of the old family flint gun, come tumbling dead from the top branches of the hickory or the maple? or the note, sweeter than Jenny Lind's, that was wont to fall upon the ear, in the well known truth-telling voice of the old half hound dog, in striking the trail of that "same old coon?" or the joy inspired by the music above all earthly harmony, of a pack in *full cry*, "*running to kill!!*" And again who would forego for base lucre, the remembrance of his delight on hearing that the coming holidays, by the "turning out" of the schoolmaster, and the secret influence of a paternal intercession, had prevailed with the pedagogue to extend the holidays some days longer than usual! aye, and, "tell the truth and shame the devil," the ill suppressed satisfaction that came over us, when told that Paddy the schoolmaster, not yet seasoned to the tide water country, had been seized with a shaking ague, and falling into the hands of the doctor, might not be abroad again for weeks! and then another enjoyment, the remembrance of which follows many a man to his grave; when the country schoolboy getting from his warm bed with sickening reluctance, looks out, and is rejoiced and animated at the sight of the *ground covered with snow!* sure that dear mother will beg "the children" off from going through *such weather* to school. If, however, the sun, as he hopes it will, *should* "break out" about 10 o'clock, when "too late to go to school," the snow need not keep him from slyly whistling up the dogs, (quick good fellows, to take the hint,) and stealing off to hunt the timid rabbit to some hollow tree, to be "smoked out" by his eager pursuers, with much more ambition and ardor than they ever pursued a problem in Dilworth, or conjugated a verb. Who, then, that has a memory for these things, (and is there any one who has not?) that does not agree with his Reverence, as to the "*indestructibility of enjoyment?*" or who can fail to agree with him, as to what he says, thus, about

FEMALE EDUCATION.

"The pursuit of knowledge is the most innocent and interesting occupation which can be given to the female sex; nor can there be a better method of checking a spirit of dissipation, than by diffusing a taste for literature. *The true way to attack vice, is by setting up something against it.* Give to woman, in early youth, something to acquire, of sufficient interest and importance to command the application of their mature faculties, and to excite their perseverance in future life; teach them that happiness is to be derived from the acquisition of knowledge, as well as the gratification of vanity, and you will raise up a much more formidable barrier against dissipation, than a host of invectives and exhortations can supply."

And again, who can contest the validity of the following remarks on the Theatre, by the same Rev. gentleman, that is, if we could be sure that the play would be a "good" one, and the house always as it should be, under the best and strictest police?

"There is something in the word *Playhouse* which seems so closely connected, in the minds of some people, with Sin and Satan, that it stands in their vocabulary for every species of abomination. And yet why? Where is every feeling more roused in favor of virtue than at a good play? Where is goodness so feelingly, so enthusiastically learned? What so solemn as to see the excellent passions of the human heart called forth by a great actor, animated by a great poet? To hear Siddons repeat what Shakespeare wrote? To behold the child and his mother—the noble and the poor artisan—the monarch and his subjects—all ages and all ranks convulsed with one common passion—wrung with one common anguish, and, with loud sobs and cries, doing involuntary homage to the God that made their hearts! What wretched infatuation to interdict such amusements as these! What a blessing that mankind can be allured from sensual gratification, and find relaxation and pleasure in such pursuits!" *Sydney Smith.*

What a transition from what precedes to what follows! It makes, however, for our fair readers, no more of a medley for this, her department, than society has made of her duties; and so we pass from the Theatre to what many like better, a good

CHICKEN POT-PIE.

Cut up and par-boil a pair of large fowls, seasoning them with pepper, salt, and nutmeg. You may add some small slices of cold ham; in which case add no salt, as the ham will make it salt enough. Or you may put in some pieces of the lean of fresh pork. You may procure a suet paste; but for a chicken pot-pie it is best to make the paste of butter, which should be fresh and of the best quality. Allow to each quart of flour, a small half pound of butter. There should be enough for a great deal of paste. Line the sides of the pot two-thirds up, with paste. Put in the chickens, with the liquor in which they were par-boiled. You may add some sliced potatoes. Intersperse the pieces of chicken with layers of paste in square slices. Then cover the whole with a lid of paste, not fitting very closely. Make a slit in the top, and boil the pie about three-quarters of an hour or more.

This pie will be greatly improved by adding some clams to the chickens while par-boiling, omitting salt in the seasoning, as the clams will salt it quite enough.

Miss Leslie's Receipt Book.

RAISING MUSCOVY DUCKS.

The best treatise on duck-raising, is by one of the most accomplished naturalists of the day, Doctor Backman, of Charleston. There is nothing in it, we believe, inconsistent with the following:

"Therefore treatment like that bestowed on farm-yard ducklings will not do for little Muscovies. They must be kept very warm and dry and snug. Their nurse, whether duck or hen, must be cooped in a sheltered, sunshiny nook. There must be no water to tempt them to dabble; for, remember, that in Brazil their first bath would be of a temperature that would grow the Victoria regia. They must have as much care and frequent attention as little turkey chicks. For food, bread crumbs, chopped egg, and boiled rice in abundance. If the boy cannot dig up a few nice little red worms four or five times a day, let them have raw beef minced fine, as for the chicks of golden and silver pheasants. Forget that they are ducklings, and treat them as the young of tender gallinaceous birds. Proceeding thus, a farmer of our acquaintance annually rears them with success. He has lately killed some fatted musk drakes, over-year's birds, it is true, which, when dressed ready for the spit, weighed 8 lbs. each. We may now guess why so many more of them are reared in France, the south of Europe, and the United States of America, than in England. First rate birds for the table, like those just quoted, deserve a little trouble, though it is not the fashion of the present day to bestow much upon them. Willoughby tells us (p. 381) respecting "*The Guiny Duck:* Anais Libyc, *Aldrov. and Bellon, which we take to be the same with the Muscovy and Cairo Duck*," that "A few years agone, a certain kind of *Ducks* began to be kept in *France*, of a middle size, between a *Goose* and *Duck*, having a broken voice, as if it had distempered or ulcerated lungs. Now there is so great a plenty of them in our country, that they are everywhere kept in cities and publicly exposed to sale: For at great entertainments and marriage feasts they are sought for and desired." And so they would be now, if some dinner-giver of eminence and reputed taste would patronise them for a single London season, and immortalise his own name by a Canard de Moscovie, a la ——; one ought not to award the title prematurely.

ON THE ART OF CURING GOOD HAMS, FOR A GENTLEMAN'S OWN TABLE.

Were we called on to state any one thing in which the State of Maryland agricultural exhibition, most undoubtedly excelled any that has occurred in any other State, we should designate the display of *Maryland hams of bacon.* Oh! how we should like to have one such occasionally, to cut and come upon for a week!

We hereby offer to any one of the Exhibitors "'tis all I have to give," a year's numbers of the "Plough, the Loom and the Anvil," as many volumes as they will leave us hams, with our good old Calvert county friend, Edward Reynolds, on Light-street wharf. In the mean time, as the season for curing will soon be here, we submit the following recipes, presented by some of the competitors. We have no doubt it might well be said of them all, "*the worst is good enough.*"

REPORT ON BACON HAMS.

The committee on Bacon report, that they tasted and carefully compared twenty-one hams, and regarding flavor without reference to the age, shape or style of the hams, have awarded the [illegible] premium to the ham with the motto "Old Maryland,"—2d do. to that with the motto "Montebello,"—3d do. with the motto "Try me, I am better than I look,"—4th do. with the motto, "Nonsuch."

The committee describe the hams by their mottoes, because they have not yet been furnished with the names of the exhibitors.

J. A. Pearce,
John C. Browne,
C. P. Holcomb, Com'tee.

Mr. Hambleton's Recipe—1st premium.

BALTIMORE, Oct. 25, 1850.

To the President of the Agricultural Society of Md.:

SIR:—Understanding the letter accompanying the ham "Old Maryland," exhibited to-day, was lost, I respectfully enclose the following receipt of its curing: To every 100 lbs. pork, take 8 lbs. of G. A. salt, 2 oz. saltpetre, 2 lbs. brown sugar 1½ oz. potash and 4 gallons of water. Mix the above, and pour the brine over the meat, after it has laid in the tub some two days. Let the hams remain six weeks in brine, and then dried several days before smoking. I have generally had the meat rubbed with fine salt when it is packed down. The meat should be perfectly cool before packing. Very respectfully,

T. E. HAMBLETON.

Motto—"Old Maryland."

The meat was raised by Thomas Tennet, of Talbot Co. Md.

MR. GLENN'S RECIPE.

To 1000 lbs. of pork, take half a bushel and half a peck of salt, 3 lbs. saltpetre, 3 lbs. sugar, and 2 quarts of molasses. Mix—rub the bacon with it well; keep on for three weeks in all, but at the end of nine days take out the hams, and put those which were at the top, at the bottom.

J. GLENN.

Motto—"Montibello."

Mr. Brooke's Recipe—3d premium.

One bushel fine salt, half bushel ground alum salt, one and half pounds saltpetre to the thousand lbs. pork, let to lie in pickle 4 weeks, hung up and smoked with hickory wood until the rind becomes a dark brown.

R. BROOKE, Jr.

Motto—"Try me, I am better than I look."

MR. SLINGLUFF'S RECIPE.

The Ham of Bacon offered, has been cured by myself agreeably with the following recipe:—To 100 lbs. Green Hams, take 8 lbs. G. A. salt, 2 lbs. brown sugar or molasses equivalent, 2 oz. saltpetre, 2 oz. pearl ashes, 4 gallons water, dissolve well, skimming off the scum arising on the surface. Pack the hams compactly in a tight vessel or cask, rubbing the fleshy part with fine salt—in a day or two pour the above pickle over the meat, taking care to keep it covered with the pickle. In four to six weeks, according to the size and weight of the hams, (that is to say, the longer period for heavy hams,) hang up to smoke, hock up; smoking with green hickory wood.

I have put up hams for the past 12 or 15 years by the above recipe with uniform success, equal at all times to the sample now presented—Motto, "Nonsuch."

C. D. SLINGLUFF.

DIAMOND DUST.

FROM ELIZA COOK'S JOURNAL.

Laziness grows upon people. It begins in cobwebs, and ends in chains.

A rusty shield prayed to the sun, and said, "O, sun! illume me with thy ray." The sun replied, "O, shield! make thyself clean."

The most sober flower will often blossom from the bud that has danced the most lightly in the sunbeam.

Civility that has no soul in it, is but mockery.

It is want of judgment not to see danger; but stupidity or rashness not to fear it.

The young not only appear to be, but really are, most beautiful in the presence of those they love.

A foolish consistency is the hobgoblin of little minds.

The legitimate end of fiction is the conveyance of truth.

Of any art universally practised, the first teacher is always forgotten.

Many are great because their associates are small.

Modesty doubles the beauties which are seen, and gives credit and esteem to all that are concealed.

Imagination—an atonement for the miseries of reality.

Some men are good company for half an hour, others for half a day, and others for their whole lives.

It is not the quantity of the meat, but the cheerfulness of the guests, which makes the feast.

DROOP NOT UPON YOUR WAY.

BY JOHN BARNES.

Ho! ye who start a noble scheme,
For general good designed;
Ye workers in a cause that tends
To benefit your kind!
Mark out the path ye fain would tread,
The game ye mean to play;
And if it be an honest one,
Keep steadfast on your way!

Although ye may not gain at once,
The points ye most desire;
Be patient—time can wonders work,
Plod on, and do not tire:
Obstructions, too, may crowd your path,
In threatening, stern array,
Yet flinch not! fear not! they may prove
Mere shadows in your way.

Then while there's work for you to do,
Stand not despairing by,
Let "forward" be the move ye make,
Let "onward" be your cry;
And when success has crowned your plans,
'Twill all your pains repay,
To see the good your labor's done—
Then DROOP NOT on your way!

THE AGRICULTURAL ADVERTISER.

DECEMBER, 1850.

LANDRETH'S

(WARRANTED)

GARDEN SEEDS.

The new crop is now generally harvested and in store. At no period within the *sixty years*, in which Landreth's Seeds have been before the public, have they been more worthy of confidence than is the crop of this season—every article is, as usual, warranted to be exactly what it is sold for, and the proprietor invites the closest inspection. A strong evidence of the estimation in which these Seeds are held, may be found in the fact, that unworthy competitors are palming their worthless trash upon the unsuspecting as LANDRETH'S. Purchasers should be cautious from whom they obtain supplies, when not had direct from the warehouse, 65 Chestnut-street, Philadelphia.

D. LANDRETH.

Landreth's Agricultural Warehouse,

65 Chestnut Street, Philadelphia,

Is fully stocked with *Ploughs* of all sizes and prices, *Vegetable Root Cutters* of new construction, warranted to cut from one to two bushels of roots per minute, (to this machine a premium was awarded at the late exhibition of the Philadelphia Agricultural Society, and high praise given it by the committee,) *Bamborough's Grain Fans*, by far the best in use, *Churns* in every variety, and a large supply of almost every implement useful in the cultivation of the soil, harvesting of crops, and preparation of food for stock.

☞ All offered at fair prices.

THE

AMERICAN LIVE-STOCK INSURANCE CO.

VINCENNES, INDIANA.

Charter Unlimited: Granted January 2d, 1850.

CAPITAL $50,000! *Stockholders Individually Liable.*

For the insurance of *Horses, Mules, Prize Bulls, Sheep, and Cattle* of every description, against the combined risks of FIRE, WATER, ACCIDENTS and DISEASE; also upon stock driven to Eastern markets, or transported South.

☞ *Losses paid in 30 days after proof of death.* ☜

DIRECTORS:

JOSEPH G. BOWMAN, Counsellor.
FERDINAND EBERWINE, Merchant.
Capt. ISAAC MASS, Merchant.
GEORGE H. DAY, Merchant.
Hon. THOMAS BISHOP.
JOHN WISE, Merchant and Bank Director.
ALVIN W. TRACY, " " "
Hon. ABNER T. ELLIS, Esq., State Senator, and Mayor of Vincennes.
ABM. SMITH, Farmer, Bank Director, and Auditor of Knox County.

JOSEPH G. BOWMAN, *President.*

B. SHURTLEFF WHITNEY, *Secretary.*

WM. BURTCH, *Treasurer*, Merchant, and President Vincennes Branch of State Bank, Indiana.

JNO. H. FRICK, Esq., *General Agent for Pennsylvania*, 75½ *Dock-street.*

☞ Agents wanted for all parts of the Union.

BOGLE'S ELECTRIC HAIR DYE.

Nothing, it seems, can go down or go along now-a-days, without *electric* influence. But Electricity was not needed at the late magnificent fair at Boston, to draw attention to the beautiful collection of exquisite things prepared by

MR. BOGLE,

AT HIS ESTABLISHMENT,

No. 277 WASHINGTON-STREET, BOSTON,

where, instantaneously, and without the least inconvenience, red, light, or gray hair may be changed to a permanent auburn, dark, or black color, without injuring or staining the skin in the least, and retaining all the original gloss and softness of the hair.

Mr. Bogle is the distinguished Inventor of and Proprietor of "Bogle's Hyperion Fluid for the Hair;" of "Habeaiona for the Complexion;" and of an exquisite article called "Amole for Shaving."

But what is of more importance to *some*, those who have no hair may be supplied with *wigs* that will make the old look young and the ugly handsome. Poets, says Mr. Bogle truly, have given the wildest wing to their fancy in describing the effects of soft, silken, flowing ringlets—nay, does not every man and woman, too, since the days of Sampson and Delilah, know how much strength there is in a good head of hair?

"Fair tresses man's imperial race ensnre,
And beauty draws us with a single hair."

Let no man go to Boston, who has a "head on his shoulders," without looking in on Bogle; true, the name's not the handsomest, but—"what's in a name?" compared to the taste and spirit of an Artist, who has devoted twenty years of his life to the study of the subject, the rich and superb fruits of which are the "HYPERION FLUID," the "HABEIONA," and the "AMOLE FOR WASHING!!!"

CHARLES LEFLER'S

FASHIONABLE BOOT & SHOE STORE,

No. 152 COURT-STREET, BOSTON,

NEAR THE REVERE HOUSE.

If any one wants to take a prize at the great Industrial Exhibition, let him send a pair of boots, specially measured for, and made by this clever, and in the line of his art, thoroughly well accomplished son of St. Crispin.

Honor and shame from no condition rise,
Act well your part, *there* all the honor lies.

What was Roger Sherman?—where is Elihu Burritt?—who was the young stranger that went walking up street, on landing in Philadelphia, with a loaf of bread under his arm? Was not Arkwright a barber's boy, and the great Herschell drummer of a regiment?

For Boot or Shoe, be sure you go
To Lefler, in Court-street;
A wiser thing thou canst not do,
For comfort to thy feet.

THE SATURDAY EVENING POST.

The Leading and Largest Weekly Paper in the Union!!

THE SATURDAY EVENING POST is now, beyond all denial, the leading as well as the largest weekly paper in the United States. Its circulation is undeniably greater than that of any other paper, of the same kind, in the Union; while its literary contents are allowed, by the best judges, to be unsurpassed. Such tales as "The Deserted Wife," "Shannondale," "The Child Stealer," and "The Two Brides," have placed "The Post," by almost universal admission, a "head and shoulders" above its contemporaries.

We now have the pleasure of announcing to the American public, that we have made arrangements with one of the

FIRST NOVELISTS IN AMERICA,

MRS. EMMA D. E. N. SOUTHWORTH, author of "RETRIBUTION," "THE DESERTED WIFE," "SHANNONDALE," etc., by which the productions of her gifted pen will be secured hereafter (with the exception of an occasional story in a Washington paper)

EXCLUSIVELY FOR THE POST.

Mrs. Southworth, as an American novelist of great power—a rising Star in the West—has been hailed with acclamation by all those who can recognize genius as well in a native as in a foreign author. We design to commence a

NEW STORY BY MRS. SOUTHWORTH,

about the beginning of the year. How many stories she will be able to furnish during 1851, will depend upon the state of her health, etc. We trust, however, that we shall be able to lay before our readers, at least THREE of those splendid productions which have made her name already so distinguished.

In the intervals of Mrs. Southworth's novelets, we design publishing other and shorter novelets from authors of admitted celebrity. We have two now on hand, which we shall publish as soon as possible.

THE IRON HAND, by T. S. ARTHUR, Esq.

THE TEXAN HUNTRESS, by C. W. WEBBER, author of "Old Hicks, the Guide," "The Shot in the Eye," etc.

And mark this! What the proprietors of the Post promise, they perform—or do better. They do not announce a long list of distinguished contributors, with whom they have made no arrangement, and whose stories never appear. Such a system may delude an intelligent public *one* year, but it will not answer a *second* time. If the public are humbugged *once*, it is the fault of the humbugger; if *twice*, it is their own.

In addition to such choice ORIGINAL articles, involving a large outlay of money, the columns of the Post will contain a great amount of miscellaneous reading—such as the

CREAM OF FOREIGN PERIODICALS,

witty and humorous articles, selections from the Agricultural Journals, riddles and conundrums, etc., etc.

REPORTS OF LECTURES.—During the past year we gave the celebrated "Lectures on Shakspeare," by Mr. Dana, and the instructive and interesting ones of Dr. Baird upon Europe—Letters from Abroad—General News—Reports of the Markets—a Bank Note and Stock List, etc. etc.

One or more PORTRAITS of remarkable persons, or PICTURES OF REMARKABLE PLACES, are also weekly given.

A MORAL PAPER.

In conclusion, we may say—that we shall maintain for the Post the character it has acquired of being a strictly moral paper; one that a parent may allow to go freely before his innocent sons and daughters. We need hardly repeat here, that the Post has done more to prevent the publication and sale of immoral works, than any half-a-dozen other papers in the land. A careful guard shall also be kept, as heretofore, over our ADVERTISING COLUMNS, that nothing of an improper character may obtain admittance.

In short, whatever is calculated to refine, instruct, amuse, or gratify, shall find its appropriate place in the POST; and let the reader mark one thing, whatever others may *promise*, we will not be behind in the *performance*. A paper that has stood for twenty-nine years, steadily progressing all that time, and which has now the *largest* list of subscribers of any paper of the same class, in the United States, is not to be left behind in the race by *any* rival.

TERMS:

The terms of the Post are Two Dollars if paid in advance, Three Dollars if not paid in advance. For Five Dollars one copy is sent three years. We continue the following low terms for Clubs, to be sent, in the city, to one address, and, in the country, to one post-office:

4	COPIES,	. . . . .	$ 5 00	PER ANNUM.
8	"	(And one to Agent, or the getter up of the Club,)	10 00	"
13	"	(And one to Agent, or the getter up of the Club,)	15 00	"
20	"	(And one to Agent, or the getter up of the Club,)	20 00	"

The money for Clubs must always be sent in advance. Subscriptions may be sent at our risk. When the sum is large, a draft should be procured if possible—the cost of which may be deducted from the amount. Address, *always post-paid*,

DEACON & PETERSON,

No. 66 South Third Street, Philadelphia.

N. B.—Any person desirous of receiving a copy of the POST, as a sample, can be accommodated by notifying the publishers by letter, *post paid*.

PENNOCK'S PATENT SEED AND GRAIN PLANTER.

FOR PLANTING

WHEAT, RYE, BARLEY, INDIAN CORN, RICE, OATS, BEANS, PEAS, RUTA BAGAS AND TURNIPS.

This machine can be regulated to drop any quantity per acre, at whatever depth required, and operates equally well on all kinds of land. It is so constructed as not to be injured by coming in contact with rocks, roots, &c. For simplicity, durability, and economy, it is unsurpassed by any other agricultural implement in use.

Price $100. A liberal discount allowed to Agents.

READ THE FOLLOWING.

Previous to harvest, we had five acres carefully measured with the chain and compass by W. Pennington, the surveyor of the neighborhood, assisted by John Jones, who saw it all cut, threshed and measured separately, with the following results:

Nos. 1 and 2.—Two acres of broadcast surveyed together—two bushels of seed to the acre—seventy-five shocks—fifty-five bushels of wheat, or 27½ bushels to the acre.

No. 3.—One acre drilled, adjoining the above, the land, if any different, rather inferior; treated exactly alike—one bushel and one peck of seed to the acre—forty-two shocks, thirty-five bushels.

No. 4.—One acre drilled a little distance from No. 3, one bushel and one peck of seed, forty-two shocks, thirty-five bushels.

No. 5.—One acre drilled a little distance from No. 4, one bushel and one peck of seed, fifty shocks, forty bushels to the acre.

Here we see that by the use of the drill alone (the soil being in the same, or perhaps an inferior condition), the crop was increased seven and a half bushels per acre, and adding the amount saved, (three pecks,) make eight bushels and one peck to the acre; and further, that the amount of straw to the drilled acre, with a smaller quantity of seed sown, increased twelve per cent., and the amount of grain on the same acre was increased more than twenty-seven per cent. * * * * * * The drill used was invented by M. PENNOCK & SONS, of Kennet Square, Chester County, Pennsylvania.

Respectfully, CHARLES NOBLE.

Philadelphia 10th, Mo., 1844.

Unionville, Chester Co., Pa., Feb. 8th, 1848.

I do hereby certify that I have used one of Pennock's Patent Drills for five years, and have put in from fifty to seventy acres of wheat for myself every year since, and have never failed having a good crop. I think I can safely say that I have realized from 30 to 50 per cent., or that it has averaged me from $300 to $400, and even $500 a year over the usual broadcast seeding. My land being low, I have lost greatly by the winter throwing the roots entirely out, which is wholly obviated by drilling. I would not take $500 for my Drill if I could not get another of the kind. JOHN HUEY.

Reedville, Mifflin Co., Pa., July 21st, 1848.

I hereby certify that, previous to harvesting, I measured one acre of wheat carefully, as follows: half an acre which had been drilled in with one of your machines, one and a quarter bushels of seed per acre—also half an acre broadcast, from one and three quarters to two bushels of seed per acre, and when cut and threshed, measured as follows:—the half acre drilled wheat, thirteen shocks, measured twelve bushels and two quarts. The half acre broadcast, eight shocks, measured seven bushels eighteen quarts. The quality of the land exactly alike, and treated alike previous to sowing the seed.

ABNER THOMPSON.

We, the undersigned, were present, saw the land measured, cut the grain, and assisted in threshing the same, and believe the above statement to be correct.

JAS. REED, ALEXANDER REED,
H. G. MORRISON, WILLIAM STEELY,
D. C. MILLER, GEORGE ASHBY.

The subscribers manufacture, and keep constantly on hand, the above machine, together with a general assortment of agricultural implements, such as Ploughs, Horse Powers, and Threshers, Hussey's Reapers, Horse Rakes, Corn Shellers, Fanning Mills, &c. Also, Pennock's Improved Lever Jack, for raising carriages and wagons; together with steam engines and mill work of every description.

Having an Iron Foundry in successful operation, they are prepared to furnish castings of superior quality at short notice. S. & M. PENNOCK.

Kennet Square, Chester Co., Pa.

Shirly, Va., Nov. 5th, 1849.

MESSRS. S. & M. PENNOCK. * * * * I have used your Patent Seed Drill, and do consider it the most simple and perfect, as well as most complete labor-saving machine I ever saw. It does the work in our lower James River county, of 14 harrows, 12 horses, and 5 good men—(one of them a good seedsman)—with only 3 harrows and 2 smart boys. I am determined to have two of your Drills by next season if possible. * * * *

Most respectfully, yours, &c., HILL CARTER.

AGENCY FOR THE PURCHASE AND SALE OF IMPROVED STOCK.

Stock Cattle of all the different breeds, Sheep, Swine, Poultry, &c., purchased to order, and carefully shipped to any part of the United States, for which a reasonable commission will be charged.

All letters, post paid, will be promptly attended to.

Address AARON CLEMENT,

Cedar-street, above 9th, Philadelphia.

August 1st, 1850.

E. WHITMAN'S

AGRICULTURAL WAREHOUSE AND SEED STORE,

No. 55 LIGHT-STREET,

BALTIMORE, Md.,

Will contain, this season, the largest stock of Improved Agricultural Implements ever offered for sale in this country, amongst which will be found

☞ 100 Whitman's Superior Wrought Iron Railway Horsepowers, which received the first premium at the last fair of the Maryland Agricultural Society.

☞ 100 Lever or Sweep Powers, among which will be found all the latest improvements.

Also Eddy's or Taplin's Horsepower, which is portable, simple, and durable, consisting of one wheel only.

☞ 200 Whitman's Thrashers, which received the first premium in Baltimore in 1849. The cylinder of this thrasher being all in one piece of iron, will last one hundred years in constant use. A great improvement has recently been made in the teeth or spikes, which makes it the most perfect machine now in use.

☞ 100 other Thrashers, comprising various kinds and improvements.

☞ 7000 Ploughs, consisting of every kind now in use, and a great variety of Cultivators, Cornplanters, Cornshellers, Straw Cutters, Seed Sowers, Grant's, Bamborough's, and various other Wheat Fans, together with every article in the farming line.

Also, a general assortment of

FIELD AND GARDEN SEEDS,

All of which will be sold, at wholesale and retail, on the most favorable terms.

EZRA WHITMAN.

APPEAL TO THE

FRIENDS OF THE AMERICAN SYSTEM,

OF WHATEVER OCCUPATION OR PARTY.

We unite in the belief that the prosperity of American industry depends on the question—Shall the laws of the country protect *American labor* against the down-trodden labor of Europe; and so diversify our employments, and secure for our products a steady market at home? *or*, shall we, by releasing the government from the obligation to develop our own resources, drive the country still further back on subjection to what General Jackson denounced as "the *policy of British merchants?*" Yes, friends, this, after all, is and will continue to be the *great bone of contention!*

Under a system of steady protection, capital and labor are invited to go into the use of our own fuel, and the manufacture of our own cloth, and iron, and china, and glass; employments become diversified, population concentrates, and with that concentration comes facility of combination, from which springs agricultural and every social improvement. Withdraw the countenance of government, and you diminish the number of employments, scatter the people, drive an over-proportion to the plough, and leave no reliable market for the ever-increasing surplus products of the land.

Old party lines are becoming fainter and fainter. The people for the time are dividing into Unionists and Disunionists. But amalgamate or separate as we may, disclaim or assume what names we may, the people will at last resolve themselves into *friends* or *opponents* of a policy that will encourage *domestic* industry against the whole world—a policy under which we may realize or forego the profit of manufacturing for ourselves the raw materials with which God has blessed our country. Those who go for protection invite the down-trodden laborer of Europe to come and help us to work up, here on the spot where Providence has bestowed them to be used, our own abundant materials for every industry.—They say to the immigrant, "We will protect and elevate you to our own level; and here, where you will become able customers, we will enjoy with you that real *bona fide* free trade, which benefits and blesses all."

Those who are opposed to protection, hang out on their banner, "Let trade be free—let us contend against the world, for the markets of the world;" to do which successfully, we must "prepare" to under work and out-starve the world.

Now, friends of the American system, be not discouraged. Parties may see-saw and fluctuate—up to-day and down to-morrow—but, under whatever name, the party that *struggles on for the protection of our own industry*—for the encouragement and elevation of *our own labor, must ultimately succeed.* It must be, sooner or later, the established policy of this country. It is the cause of our country, of humanity, of progress, of civilization. The truth is mighty, and finally it must prevail.

We go then for protection. Reader, do you? "Yes," you answer. Well then *come to our aid in the battle we are fighting.*

Here, in the "Plough, the Loom and the Anvil," you have the first journal established *expressly and avowedly* to *prove* to the agricultural community, whose representatives regulate the policy of government, that agriculture *never did* and *never can* reach a high degree of prosperity, in any country that exports its raw materials, and depends on foreigners for its supplies of manufactures. Foreigners whose power to consume is small in proportion to the *cheapness of their labor!*

Now, is it fair to leave me to maintain this contest, in an agricultural journal, single-handed, and without adequate assistance? Is it fair, is it just, I won't say is it generous, to demand of a man who has been more than thirty years laboring to promote all the great industries of the country, to earn, to collect, and to pay away nearly $4,000 in support of this *common* cause, *before he can secure enough to buy a loaf of bread?* I say *common* cause, since all are interested in the question, who live by their labor. If other industries are put down by the competition of the abject labor of foreign countries, must not those who are driven from them, become the rivals of the farmer, and to swell the surplus products of the Plough?

If I may believe assurances that reach me from the South and West, the disposition to draw the loom and the anvil to the side of the plough, under the influence of arguments urged in every number of this journal, is spreading fast and taking deep root—but as far as depends on me and this journal, *I must have more support.* I ask it then frankly and respectfully. I have forborne to call on Hercules until I put my own shoulder to the wheel. Cannot 100 gentlemen be found, in all the States, who will contribute $10 each, and find subscribers, or indicate to whom the numbers shall be sent? What say you, friends of domestic industry? Here I, without a dollar, am laboring for the cause, day in and day out, most willingly, for I know there is no other guarantee for general uniform improvement and prosperity for those whose labor and capital are employed in agriculture; but, *I must have bread*, and what I here ask will barely give it. I ask no man's charity—I offer a full equivalent, and contribute to the cause the hard earnings of my own labor to the amount of *hundreds where I ask for tens.* I will keep, and if allowed, publish, the names of all who respond to this call. Time will soon decide.

J. S. S., Ed. P. L. & A.

Extract of a Letter from N. Ewing, Esqr.

Uniontown, Nov. 21, 1850.

The value of your journal cannot be estimated in money. If it could only be brought before the sober judgments of men, I am persuaded it would work a revolution which would add millions to the wealth of the country. It is, however, difficult to get our farmers to read and think; but I trust they are slowly feeling their way to the truth.

☞ Editors of papers with whom we exchange, and those who desire to exchange, will please publish the above. The exchange is an act of courtesy on our part that we have never refused, though (with every respect for the papers that come to us, and for their editors, without any distinction of party,) we have not time to open them.